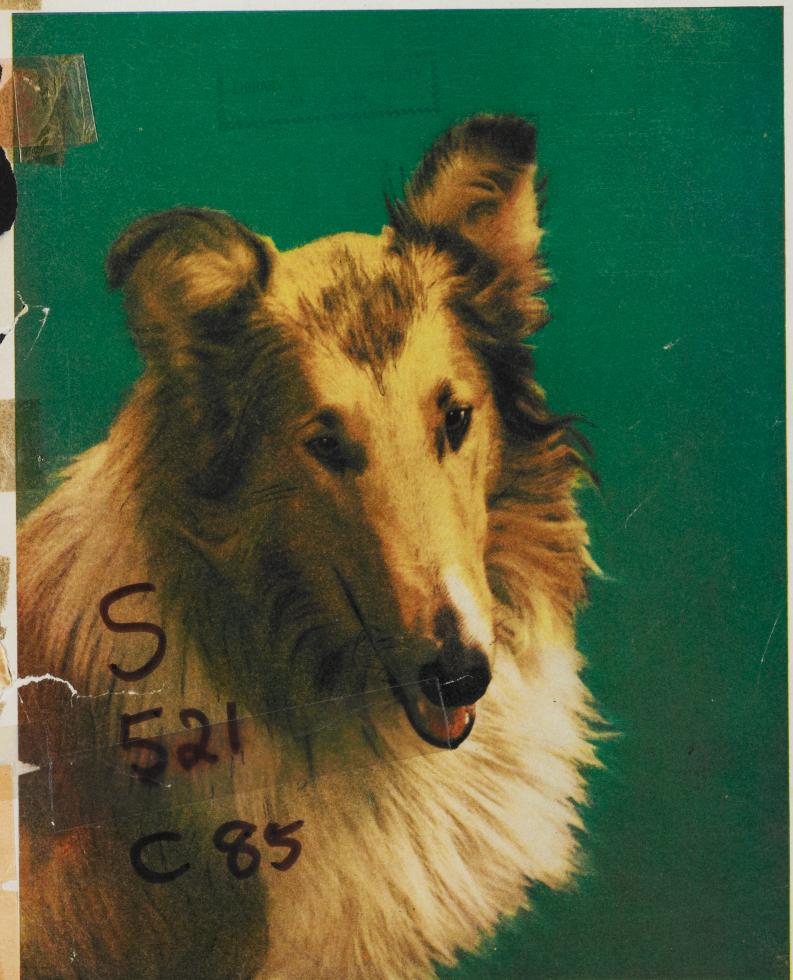
THE COUNTY GUIDE

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17. APR. 195



APRIL, 1950



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Here's a kitchen so pleasant you'll even want to loaf in it! Of course, the more time you spend here, the more you'll appreciate the beau' the ease-of-cleaning, the long-lastingness of a Gold Seal Congoleum Rug. For Congoleum has a wear-layer of heat-toughened paint and baked enamel equal in thickness to 8 coats of best floor paint applied by hand. And it's the only enamel surface floor covering with the famous money-back guarantee. Look for it on the rug you buy!

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APRIL, 1950

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Under The Peace Tower

HE Senate has been bellyaching that it doesn't get enough publicity. The short answer is that it would get plenty if it ever got close to the people.

The campaign to get more Senate news started on two fronts, as far as I am concerned. One was when Senator W. H. Dennis, newspaper proprietor from Halifax, and an aggressive, livewire Canadian, made a speech. It was against doctor's orders, he said. He could have gone farther. He was given up for dead, two years ago. But like Lazarus, he came back, and he said the Senate needed more publicity. Meanwhile, at the Brazilian Embassy cocktail party, I got talking to Hon. Senator Wishart Robertson, government leader in the Senate. A realistic Bluenose, who earlier in life got homesick for Nova Scotia while working for the Grand Trunk Pacific out West, Robertson is a man to accept ideas as well as give them.

We now use the Senator as a guinea pig into which I propose to pump a few ideas about more senatorial publicity. I have been kicking around parliament for 20 years now, and must confess that collectively, the Senate are a dull lot. Stimulating individually, they are a sleeping pill, collectively. Did I mention sleep? The Senate often reminds me of Rosebud, who slept in the enchanted castle with her staff for 100 years, waiting for Prince Charming to bring them to life with a kiss on fair Rosebud's lips. That could be the brave Sir Louis, Knight of St. Lawrence, walking into their sleeping castle some of these fine days with a kiss from his boot, namely, an age

But the trouble with the Senate rests mainly through its relations with the press-or lack of them. For one thing, nobody knows when the Senate meets. They do not seem to have the moral responsibility to press or public to meet at any special time.

The Senate prates of and insists fiercely upon its independence. But its independence melts down into a little rubber stamp when it comes to passing government measures. The Senate, as far as the average newspaperman is concerned, keeps its time of meeting more secret than a conclave of H-Bomb scientists. For comparison, the Commons meets every day at 3:00 p.m. Why could not the Senate make up its mind that it would meet say, at 4:00 p.m.? By that time, the Commons would have gone through the question period, and would have settled down to daily routine.

 $T^{
m HE}$ Senate, meeting punctually at 4:00 p.m., and instituting its own question period, would draw its quota of newspapermen. Even if it only sat half an hour, at least it would be known that the Senate was sitting. Today, so obscurely does the Senate toil, that only one man covers it regularly, and he sits entombed alive in the red catacombs.

This takes nothing from the truly excellent work done by Thomas Green, veteran newspaperman, and president of the Press Gallery this year. He covers the sessions, makes quick and accurate reports, and has them available to the press in record time. But



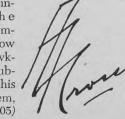
what I am complaining about is the Senate itself.

Let us consider some of the niggling annoyances, which prevent the pressand that means the public-from getting the news regularly. I mentioned the fact that one never knows when the august senators are meeting, nor for how long, nor on what. Then, there is the matter of the Hansard. The Commons Hansard make copies quickly available. When you have to go to the Senate, you find them operating in a small way, and they are almost shocked when you ask for extra copies of Senate reports. There is nothing personal about this, but the general attitude is the indulgent smile of mamma when she has work to do, and you had better go out and play, dear. So the Senate Hansard, which would give a complete version of what the Senators say, is not available in any quantities till next day, and the printed Hansard is hard to get. This stiffness of operation contrasts sharply with the attitude of the Commons Hansard staff, which functions as genially as a hotel manager with an empty house.

 ${
m A}^{
m GAIN}$, and here is another pin prick. The custodian of the door leading into the Senate Press Gallery is a crusty fellow, who won't open the door till the last minute, who regards all newspapermen as a nuisance, and who shoos them out like so many pan handlers, the second the Senate creeps through its last whisper. Question: Does Senator Wishart Robertson know about this Iron Curtain door, and how much news it costs the Senate in a year?

Again, a small item. The Press Gallery, when it uses stationery, uses specially printed Commons stationery. The Senate never gives the newspapermen any. One would think the Senators were paying for the letterhead out of their own pockets. Yet

the Senate should be as much interested in the press as the Commons is. And now they are squawking about publicity. True, this / is a small item, (Turn to page 105)





"Our Sunday harvest is the talk-of-the-town!"

- says MRS. MILFORD LANGLAS

"The only thing we harvest on Sunday," says Mrs. Langlas, "is a crop of friendly gossip, local chatter, and recipes!

'So Sunday is our favorite day—a day we can dress up, go to church, and socialize with the neighbors. But I put all this away Sunday night. And I get set for a week of socializing with the wash-tub, house chores, and farm work.

"Yet with all this work, I keep hands Sunday-beautiful with Jergens Lotion!"



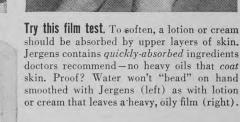
"Swinging milk buckets from barn to house is tough on hands," says Mrs. Langlas. "So I make sure my hands get daily care with soothing Jergens Lotion. Jergens Lotion keeps hands smooth, and soft as quilting cotton.'



"I love my flower beds, but beautiful flowers make ugly hands if I'm not careful. So, after every weed-pulling session, I head straight for Jergens Lotion to hold down roughness, chapping." 10¢, 28¢, 53¢, 98¢.



"Girls want to grow up pretty and that includes having pretty hands! My two little girls use Jergens. The whole family does." Being a liquid, Jergens Lotion quickly furnishes softening moisture for thirsty skin.



Try this film test. To soften, a lotion or cream should be absorbed by upper layers of skin. Jergens contains quickly-absorbed ingredients doctors recommend—no heavy oils that *coat* skin. Proof? Water won't "bead" on hand smoothed with Jergens (left) as with lotion

(MADE IN CANADA)

More women use Jergens Lotion than any other hand care in the world!

Farmers "Workhorse"



N February 13, 1947, when an experimental wildcat belched oil-fire and smoke into the wintry sky about 20 miles southwest of Edmonton, the economic structure of the West was booked for a change.

In Alberta, three years later, hundreds of new oil derricks blossom against the skyline at night. Oil tankers are lined up on the railway sidings. Oil crews traffic through the cities, and oil equipment clutters the road spokes converging on the hub that

is the oil fields. Farm boys are earning \$20 a day or better on the derricks and in the fields, and many of them are rising to positions of importance in the petroleum industry.

In many other ways it is difficult to see the change. Agriculture is still the backbone of the provincial economy. Edmonton, the new oil capital of Canada—and gateway to the fabulous untapped north—has been described by observers within and without the city as "the dullest boom town in history." It is largely down underneath that oil is

altering the status of not only the West, but of all Canada. And at increasing speed.

If any phase of this becomes a "has-been"—at least for decades to come—it will be the black oil tankers on the railway sidings. Now, work is well underway on a \$90,000,000 pipe line. When completed, it will stretch 1,150 miles, like a great, pulsing underground artery, from Edmonton to Superior, Wisconsin, on the southern tip of Lake Superior. Twenty-inch pipe will carry Alberta's black gold the 450 miles from Edmonton to Regina; 16-inch pipe will be buried on the 340 miles between Regina and Gretna, Manitoba; and 18-inch pipe will cover the 360 miles between Gretna and the Lakehead. Millions of barrels of oil will flow through that long, hollow tube of steel, pushed steadily forward by six pumping stations at Edmonton, Ermine, Regina, Cromer, Gretna and Clear-brook.

THE long distance will be patrolled by air—it will take about 26 days for one barrel of oil to move from Edmonton to Superior. The pipe line is being built, and will be maintained,

by the Interprovincial Pipe Line Co.—a brain-child of Imperial Oil's.

The financial benefits to be derivedfrom the completion of the line are exercises in using the imagination. Perhaps an inkling of what the "oil artery" will mean to our over-all Canadian economy can best be gleaned by looking briefly at what the three-year-old oil boom has

already wrought in Alberta.

For Aberhart, who preached the gospel of \$25 dividends, the spectacle of the province in her 1950 coming-out gown, might be unbelievable. Fifteen years ago, the treasury was bankrupt. Alberta was



Above: Workers wrap pipe by hand before applying a liquid bituminous material which preserves it from rust. Right: One of the giant ditchers at work in the field.

JOHN PATRICK GILLESE

tells something about the inspiration and perspiration that is going into the mammoth construction job which will become Alberta's



the first provincial government to default on bond payments. Today, Aberhart's chosen successor, Manning, has at his feet the tangible realism of the great wealth the old Bible-quoting Social Credit war horse told Albertans was their heritage.

During the first six months of the current fiscal year (ending September 30 last) oil revenue swelled the provincial coffers by more than \$18,000,000. For the whole year, it is expected the "take" will amount to better than \$30,000,000. The Crown collects an average royalty of one barrel—worth about \$3—out of every eight barrels of oil produced on crown lands.

For Crown land leases, the figures are astronomical. A Calgary investment firm, Tanner and Co., paid more than \$5,700 an acre for the right to drill four wells on a quarter-section of the Redwater fields—a total of \$918,662. British-American Oil

An arc welder joining pipe in the field.

Welding crews accomplish much in a day
for their equipment is transported from
joint to joint in special trucks.

Photos courtesy of Imperial Oil Co.

Photos courtesy of Imperial Oil Co.

Co. paid \$902,800 for drilling rights on 160 acres in the same area. Amerada Petroleum Corp. forked over \$3,233,320 for drilling rights on a section. Other firms followed suit as best they might. In outright revenue from the sale of leases alone, the government

collected more than \$20,000,000 during 1949.

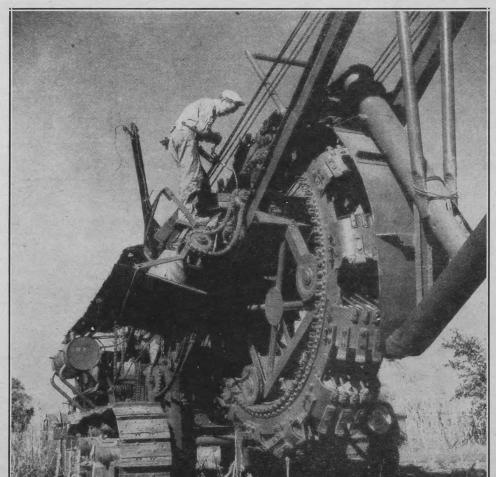
After awhile, the figures become meaningless. If contrast helps, consider these: from \$100,000,000 to \$150,000,000 yearly is being spent on oil development in western Canada. Alberta's provincial debt stands at a healthy low of \$128,000,000. Giving credit to Manning, who has been steadily whittling down the debt since he became premier in 1943, the fact now seems apparent that oil revenues will be the mightiest factor in erasing the long-hated "mortgage." In short, oil riches threaten to rob the premier of the credit given him as a shrewd manager of the big business enterprise that is Alberta.

A T the moment, aside from the fact that prairie consumers are being saved some \$9,000,000 a year on their bills for gasoline, tractor distillate and other fuels, most Alberta residents see the benefit of the oil boom in ever-expanding industries, oil towns and large-scale capital improvements. Road and highway improvements are probably the most

spectacular, while other millions of dollars are being spent on social services and conservation projects: a \$1,500,-000, 300-bed sanatorium, in Edmonton; a new T.B. hospital at Oliver; a \$75,000 occupational-t h e r a p y building at Ponoka; a million-dollar grant-and-loan to the University of Alberta (where Premier Manning recently received an honorary Doctor's degree); well over a million dollars for forest conservation on the Eastern Rockies; great appropriations for highways, bridges, irrigation projects, etc.

Against this background, it may seem impossible to become excited over the building of a pipe line artery which, to the general eye of the public, will soon be covered over by the good earth and largely forgotten. Yet not only is this

(Turn to page 66)





Circling wider to pick up the scent, Satan got too far away from Spaulding, and the wolf pack cut him off.

HAT midnight, thirty miles up Rivere Epinette, Spaulding halted and made a lonely camp in a grove of white birch. In the ghostly grey of dawn, despite the cold being most intense then, he roused the huskies and started on again, travelling all that day and far into the next night.

The weather showed signs of fairing off, and he wanted to make time while the chance was given him. Under the relentless pace his dogs were beginning to weaken, but he dared not slow up. Only Satan, the leader, did not falter. Spaulding knew that if the chase went on past Lem Fullerton's cache and swung west toward the Thunder Hills, before many miles he and the great black leader would be travelling alone.

The broad bosom of Riviere Epinette was a winter highway beyond compare. Smooth and unimpeded, its snow hard-packed by the blizzards of the moon just passing, it stretched through long, silent leagues of spruce and minaret pine straight away into the northwest.

The endless forest that he passed through—all life seemed frozen out of it. The moose and deer and woodland caribou had long since yarded in the depths of some birch swamp. By day he saw an occasional whisky-jack, a family of twittering snowflakes, or a tiny redpoll perched on a riverbank reed. At night he heard the deep-toned hooting of the Arctic horned owl or a faraway wolf chorus quivering on the still, taut air. But for the most part the woods were lifeless and silent; and the walls of spruce threw back the *skrunch* of his racquet beam, the steady whine of *komatik* runners on dry snow.

One hundred and forty miles up the Epinette, where the river began to dwindle and to corkscrew from one lake system to another, he cut aside from the stream he had been following and struck left into the Strong Woods. Partly by his instinct of direction, partly by observing the sun and stars, he travelled on northwest, heading straight as a teal-flight for his goal.

It was a wild, uncharted, unknown country that Spaulding traversed. Now a region of heavy pine forest. Now an upland where the graceful, slender spruce, eight inches across at their base, towered a hundred feet in the air. Now a gloomy swamp country of birch and banksia. Now a nameless whitefish river that he followed. Now a nameless range of hills he whipped over, where the tenacious lodgepole pines, exposed to sub-Arctic blizzards, were twisted and gnarled out of all semblance to timber.

It was a period between blizzards, a period of still, beautiful cold—so still that his breath trailed behind him in frozen white wisps, so cold that at times he breathed through the fur of his mittens as he ran ahead of his team. By day a wan coppery sun, surrounded by a halo of sundogs, swung through its short arc in the pale apple-green sky. With night came the aurora shooting its searchlights of violets and vivid reds and exotic orange and yellow down from the northern heavens.

One evening, an hour after darkness had fallen, Spaulding at last reached Lem Fullerton's secret cache.

It was a squat cabin, heavily built to keep out bear or carcajou, roofed with six-inch logs and banked halfway to the eaves with granite rocks. It sat a bowshot back from a creek bank—hidden from canoes traversing that stream in summer.

IT seemed tenantless to Spaulding as he crept upon it cautiously. There was no glimmer of light through the bear-gut window, no pencil of smoke against the star-studded sky. And Satan, crouching beside Spaulding, raised his keen nose and sniffed at the shack without growling.

Spaulding strode on up, lifted the massive doorbar, and stepped inside. By the light of his electric lantern he looked around. A few small casks of "permit," a dozen carrots of tobacco, odds and ends of trade goods; and against the far wall a stack of green peltry—pacquetons of marten, mink, otter and dark fox.

Lem Fullerton had beaten him there, had left the incriminating furs, and gone on westward!

After kindling a fire in the sheet-iron stove, Spaulding brought the rest of his team inside, thawed the ice out of their fur and watched them drop asleep on the floor. He himself sat up an hour, restringing a snowshoe, feeding the stove, thinking.

THE peltry stacked against the wall drew his eyes like a magnet. He could not help glancing at it. Fullerton had made a haul, a harvest rich indeed. Those beautiful, dark-gleaming furs represented many thousands of dollars. But every pacqueton of them had cost a human life, a couple of lives.

It was no wonder that Norrys at first had not believed a man capable of that. There were incidents of the last three years which Norrys knew nothing about, incidents which would have prepared him to believe, incidents to which this death-scattering trip was only a climax. All of them sprang from the trader's selfishness and his greed for money, money!

One of them came back to Spaulding in all its sordid details as he sat working on his racquet. He seldom allowed himself to think about it, for it roused him to overpowering anger. It concerned a big-game hunter who had come north that autumn past with guides and silk tents and fancy rifles to hunt moose, and his crazed infatuation for Aurore, and his very decent proffer of marriage. And then, when that failed, his offer to Lem Fullerton of money enough to live the rest of his years at The Pas in idle comfort, if he would bring about "some arrangement."

Spaulding could understand and even excuse the infatuation. But Lem Fullerton's attempt to coerce Aurore, to drive that infamous bargain like any Dog-Rib selling his daughter—that was beyond Spaulding's patience and charity.

As he looked back on those three years he wondered if he had done right to cover up those shadowy dealings. Perhaps he should have come

down hard on Lem Fullerton. Perhaps he could gradually have opened Aurore's eyes-and Dick'sto the sorry truth. Perhaps-but hindsight was easy. He had acted then according to his best judgment, his clearest conscience. The past was dead beyond resurrection; it was the future that troubled Spaulding.

 ${f D}^{
m URING}$ their last talk back at the stricken camp of the Epinette Crees, Norrys in his wise, quiet way had asked a tremendous question: "Can you ever marry Aurore-remembering that?" There were times when Spaulding swore he could bury the memory and forget it utterly. But in moments of deeper insight he knew that he could not. He could and would marry her. But in the long years ahead he could never look into her candid, innocent eyes without those memories trooping back, without that secret thrusting its ogre face between them.

The next morning, when Spaulding was harnessing up his team outside, he halted in surprise. From his examinations of the cache he had believed that Fullerton left there five or six days before. But outside, that morning, he discovered tracks of Fullerton's komatik and racquets, tracks not more than two days old.

He would have a trail to follow, instead of striking blindly westward and ferreting the trader out in that hill country. And it meant he would come up with Fullerton in four days at the most, if he travelled swiftly and no blizzard struck to blot out the tracks.

Taking up the trail, he followed it westward. At midafternoon he clipped past Fullerton's first night camp; and the tracks thereafter were markedly fresher. At purpling twilight two of his dogs dropped in their traces. He unhitched them, scraped out a snow burrow, left them a dozen frozen whitefish in case they revived-and hurried on, following the tracks by his electric torch.

The next noon three more of his huskies gave out; and the other two, even with Satan's help,could not pull the komatik. Abandoning sled, team, packs-everything save his rifle, his sleeping pouch and a few days' food for himself and the husky leader-Spaulding pushed on.

The tracks were steadily getting fresher. He knew he would overtake Fullerton within thirty-six hours-if nothing checked his pursuit. Anxiously he kept glancing at the sky. For the last ten days the weather had favored him. It could not last. Already a brick-dust sheen-the herald of a blizzard-hung

above the northeast horizon; and the Strong Woods had the hushed expectancy that told of a storm at hand.

Late that afternoon he ran into a caribou yard; a small band of the animals had trampled down several square rods in a swamp, making a hard-packed area to fight off wolves. Their paths, deep as a man's head and hands, led out into birch thickets where they browsed. Spaulding stopped long enough to shoot a year-

ling bull and cook a strengthening meal for himself and Satan. Because of the coming storm and the uncertainty of food in that frozen solitude, he took

along a dozen pounds of the meat.

He hoped to come upon Lem Fullerton's camp that night. He unslung his rifle and carried it ready. Fullerton's dogs would give the trader warning. At first glimpse of his pursuer, the trader would understand that here was the final account between them-Spaulding knew.

 ${f B}^{
m UT}$ his caution was needless. His pace had slackened, and the trail led through a deerbush country where travel was a torture. When morning broke and he came upon Fullerton's camp, his tracks leading on westward were a couple of

A faint wind was whining through the spruce tops as he took up the chase for a last supreme effort. A soum of leaden cloud was scudding out of the northwest. All that morning, as-he hung doggedly to the trail, the whining overhead dropped lower, and grew more ominous; and the film of cloud deepened into a greyish black.

At midafternoon the blizzard suddenly swooped to earth and loosed its full-lunged fury. The trail, so fresh now that snow still tumbled into the groove of the komatik runners, was blotted out in a twinkling. The surface of the snow seethed and crawled. Fantastic, wind-born wraiths rose up and whirled out of sight down-wind. The savage, clublike blasts rocked the pines and spruce, and streamed their mile-long banners through the air. They wrapped and blanketed Spaulding in smothering spindrift; they fought at him, clutched at him; and their spicules of snow and ice

stung him like tiny daggers. He struggled on, despite storm, exhaustion and the

spectre of defeat. The tracks were hidden from his eyes, but the fresh scent of man and dogs was not hidden from the keen nose of Satan. The great black dog trotted ahead now. He knew it was his business to follow the trail they had been on so many miles, and he followed it, so unerringly, swiftly, that Spaulding broke into a run to keep up with him.

In all that inferno of storm and gathering dark and blinding spindrift, Spaulding's instinct for di-

rection clung to him. It seemed to him that the trail did not lead straight; that it wandered erratically, corkscrewed and doubled back upon itself. He reasoned that Fullerton was hunting a sheltered camp-site to wait out the blizzard, and so was probably less than a mile away.

For the last several hours he had been aware of seven wolves flanking him out in the deer-bush. They had smelled the fresh meat he carried, and had followed. He had glimpsed them several times, filtering like tawny shadows through the undergrowth, but keeping their distance. He paid no attention to them. From their wary behavior he knew they would never close upon him.

When the blizzard struck they drew nearer. Through rifts in the swirling spindrift he caught glimpses of them, forty yards away. They bothered Satan at his trailing. Whenever the husky leader

circling like the path of a drunken man. The intricacies of it baffled Satan. He tried valiantly to straighten it out, to follow its tortuous route. Even after he had lost it completely, he strove to pick it up again. Circling wider and wider, stopping at times to dig in the snow for scent, he got too far away from Spaulding, and the wolf pack cut

Spaulding heard the thrashing of underbrush, the snarls, and hurried up. The great dog had gone down under the first rush, but had fought to his

feet again. The wolves were surging over him, a wave of grey forms, trying to drag him down. Rushing into the fight, Spaulding saw his husky tear the throat out of a wolf; saw him crunch the leg of another in his powerful jaws; saw him rise up on hindlegs, meeting fang to fang the big tawny leader of the pack.

Spaulding's heavy rifle spoke four times. He dared not shoot the wolf leader, and there was no need. For Satan rode him down, pinned him on the snow. A few moments of fangs clashing, of muzzles sparring for a death-grip, and

the great dog found the throttle hold . . .

While Spaulding was kneeling, prying Satan loose from the twitching tawny form, he heard a sudden yelp and a flurry of barking behind him. Whirling, he saw several long grey forms leaping out of the murky twilight toward him. At first he thought they were wolves-another pack; but the significance of the barking stayed him from swinging his clubbed rifle at them.

DOGS! A husky team! They had heard the rifle-shots flung down-wind, or had caught the wolf scent, and rushed away from camp to join the fight!

And then as they slipped past him-snarling at the dead wolves-he saw them plainly, and suddenly realized they were the dog team of Lem Fullerton.

Quickly, before their tracks were whipped shut,

Spaulding took up their backtrail, It led down-wind-as he had guessed. He hurried, forgetting to reload his rifle or to thrash his numbed right hand back to usefulness.

Dimly through the blind swirl the outlines of a tent rose up before him. A few paces closer, and he made out the figure of a man staggering toward the tent, a load of firewood in his arms. Then a furious blast struck and blotted out vision.

Spaulding stepped forward.

T the Fullerton trading station five people A waited through the lengthening weeks in growing suspense. The focus of their sharp anxiety was Arnold Spaulding.

It was verging on two months now since he parted from Norrys and struck out alone into the northwest. Reckoning all possible delay from blizzards and hard travelling, he should have returned long before this. But not a word had they heard from him; not a whisper had come out of the Strong Woods. Something had happened to him. His long absence could not otherwise be explained. And as proof of some disaster, three of his dogs had come trickling in, gaunt and woebegone, their coats matted with ice.

Dick Fullerton, on his frequent trips to the post, kept insisting: "Spaulding's after that half-breed trader. He'll turn up somewhere with the dirty skunk. Maybe west on the Athabaska, maybe clear over east to Hudson Bay. Don't worry about the dogs coming back; I've seen him wear out dogs before. He won't come in (Turn to page 72)



THE SERGEANT OF LONE CREE

by WILLIAM BYRON MOWERY

What Spaulding had deliberately taken upon himself seemed more than a mortal should be called upon to bear. Norrys waited anxiously in the cabin for his return and later heard the story of the dramatic end of his friend's mission, told in a soft, calm voice

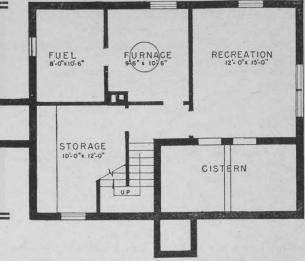
got too far ahead of his master, they threatened to spring in and attack him. Spaulding was tempted to shoot a couple and drive the pack away. But Fullerton was somewhere close; he might hear the rifleshots, take warning and escape.

It seemed to Spaulding that darkness and the wolf threat and Satan's losing the trail irrecoverably all came to a head at the same instant.

In a heavy, dark forest of wind-whipping pine the trail crossed and recrossed itself a dozen times, 10

The second floor plan.

A Two-Storey House



Plan of the full basement.

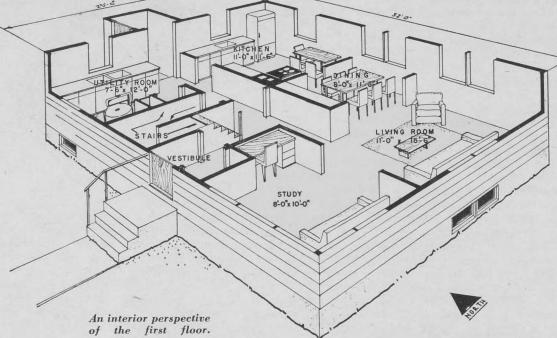
HE Country Guide Plan No. 5 presents a two-storey farm dwelling. The over-all dimensions are 25'-0"x 32'-0". This house has advantages over either the bungalow or oneand-one-half-storey type. It is compact and this compactness makes for economy in heating costs. Though it will not be classed as a "large house," the number of "large rooms provided affords generous space for all family activities. At the same time it offers a high degree of privacy for individual members of the household.

A study of the floor plans shows provision for three bedrooms, sep-

arate dining room, study, sewing area, as well as kitchen, utility room and bath. The room indicated as "study," on the first floor, with its wide expanse of windows is in effect a sunroom. It could be so used or, if and when the occasion arose, be used as an extra bedroom to accommodate someone who is convalescing or is in need of nursing care. It would be a cheerful and convenient room. This room could be fitted with double "French doors.

THE separate dining room is a feature which will be welcomed by be welcomed by many families. There is space in the kitchen for a dining nook, useful for breakfasts and quick lunches. The homemaker with a larger family will probably welcome a space apart from the kitchen, yet adjacent to it, for dining. This room is ample in size for the purpose intended. A built-in buffet along the wall opposite the windows would tend to give the room a more spacious appearance. It would also provide good storage space for dishes, silverware and table linens. The

dining room may be closed off from the living room by a partition, a part wall and archway,



FEATURES OF THE PLAN

Separate dining room. Possibility of four bedrooms. Minimum amount of hall space. Adequate storage areas provided. Makes for saving in heating costs. Flexibility in living, dining and study areas.

and French doors, the whole space would have an air of gracious hospitality when entertaining groups of friends or holding a social gathering in the home.

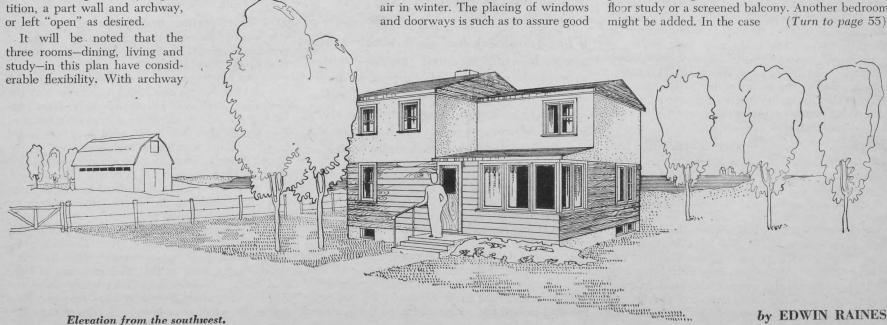
The recreation room in the basement would provide a suitable place for games or for individual hobbies. It will go far towards helping keep other rooms of the house tidy and quiet. Children may romp in such an area while mother has guests to dinner on the first floor, and a student or sleeping child on the second floor would not be disturbed.

Note that front and back doors open into a vestibule, a feature which serves to shield the rooms from sudden drafts of cold

cross-ventilation in all rooms, a welcome feature during hot summer days and nights. The entrances have planned so as to conflict as little as possible with valuable living or working space. Ample space is provided for clothes storage in all bedrooms and near to both the front and back doors. There is a minimum of space lost in the halls and stairway. Careful planning is shown in the location of the chimney so that it too does not cut into useful space on either floor.

The work areas: kitchen and utility room are designed with a view to affording space for equipment to be stored at points where it is most used. The utility room provides space for laundry and dairy tasks, a wash-up sink and cupboards for utensils and supplies. The kitchen with three well-defined areas; the sink center including the refrigerator, the range center with adjoining cupboards and the dining nook. With kitchen and adjoining utility room, the housewife will be able to save both time and strength in carrying out household tasks. While working in one she will not at any time be very far from operations which may be going on in the other room.

DETAILED study of the second floor plan A reveals three bedrooms, a sewing area, bathroom and a linen closet. Two bedrooms are of average size and both have clothes closets. The third and larger room could serve as a master bedroom or with two beds as a children's room. The two clothes closets provided will be welcomed in either case. A variation of this second floor plan is possible, having either a sun deck over the first floor study or a screened balcony. Another bedroom might be added. In the case (Turn to page 55)



FILM BOARD FRACAS

A Canadian government agency with ten years of praise worthy accomplishment behind it finds itself under fire.

Who were the marksmen and why?

HE question marks in the National Film Board fracas are many, some big, some small. This government agency sprang into international renown, then suddenly on its tenth birthday gets a pasting in parliament such as few young organizations can take and come out whole. The pasting was front-paged from the Yukon to Cape Breton. Is the NFB record all its defenders claim? Has the Board really done so much to get the ordinary Canadian Joe, his work-a-day and community life, on the screens of his own country and the world? NFB defenders say: Yes, emphatically yes.

But the NFB's critics growl back—late last year they were shouting. Are they right when they say this agency is giving the private film industry the old monopoly bear hug? Statism squeezing private enterprise. Are the documentary film-makers really nothing but a bunch of long-hairs throwing taxpayers' dough around on a cultural spree? Do Moscow spies really lurk about the NFB Ottawa studios?

What about all this?

First, let's flash back to prewar Ottawa. The year is '38 and in the capital there's a dark, vital little Scot of brilliant imagination. Then in his early forties, John Grierson, leading pioneer and dean of British documentary film-makers, had come to this country at the invitation of the Mackenzie King government. The head of the government, in point of fact, was said to have done the inviting.

Some filming had been carried on by governmental departments for years—since 1915 by one. But there wasn't much organization to it. A bit had been done by Agriculture's livestock branch; by Mines and Resources' lands, parks and forests branch; by Trade and Commerce exhibitions and publicity bureau; by Interior's Northwest Territories and Yukon branch; by the National Museum; and, finally, by the Government Motion Picture Bureau.

THE government wanted to centralize and co-ordinate this patchwork of activities. Grierson was asked to recommend a plan and suggest

legislation. The first result was that by the spring of 1939 a bill calling for a national film act was spread out before the M.P.'s. And right then began the birth pangs of Canada's National Film Board.

Several Tories immediately raised the "keep government out of business" battle cry. Up front was Hon. Earle Lawson, one of Bennett's old pre-election ministers. He was direct.

As a lawyer, Mr. Lawson had not only "represented many phases of the motion picture business," he'd also been in it. That prominent Conservative wagged a finger at the benches opposite. Movie making took a lot of money and a lot of skills. A risky venture. The government wouldn't be able to show a profit. If any department needed a film, it should be "produced by Associated Screen News (of Montreal) or the other film concern, the name of which I have forgotten." (Mr.

Lawson was well pasted by the public in 1940's general election, decided he'd had enough, and never ran for parliament again.)

Trade and Commerce Minister W. D. Euler, the bill's sponsor, observed that profits weren't exactly the government's aim. The board the government asked for would "...help Canadians in all parts

of Canada to understand the ways of living and the problems of Canadians in other parts. . . ." It would also distribute government films beyond the frontiers. And something else: the new board would "advise upon and approve production, distribution and exhibition contracts and agreements in connection with film activities of the several departments of the government. It would act as intermediary between such departments and commercial firms." (Keep your eye on this as we go along.)

The National Film Act got royal assent on May 2, 1939. The Tories suggested whom they'd like to head the new National Film Board. Mr. King's government hired Grierson.

A postgraduate of government vs. private enterprise discussions in Britain, the new commissioner chose Ross McLean as top assistant and shrewdly steered the NFB past more than a few shoals. A share of the government film contracts would go to the small private companies in the industry. More, it was Film Board policy to lend a hand in other ways to create a domestic movie industry. Still more, the Board would try to get the American-owned theatre chains in this country to let Canadians see a Canadian film or so on their own screens.

by FLETCHER FRANCIS



Above: Elsie Williams fills a request from the NFB library at London, Ont.

Left: Two NFB operators in a sugar beet crop at Barnwell, Alta., talk to owner E. M. Jensen.

Over the next few years, the far-sighted Grierson got people from all over the map to come and let prospective native talent see how documentary films were made. Directors, cameramen, lab experts, sound men, animation artists, film editors, all the kinds of technicians, craftsmen and artists that play the complete business of film making. There were Britishers, Australians, Frenchmen, Dutchmen, Americans, refugee Germans, and there were others. Then he nudged Canadians into their company. It didn't take much nudging for in any country it doesn't happen often that youngsters, and the not-so-young, get that kind of chance to test their talents.

In these early days the Board's critics sighted on the salaries paid to the imports. People widely known in their field hired on short term were favorite game. For example, one or two crack news cameramen, from south of the border were sniped at several times. The answer given was that there was a war on, and trained operators picked up on short notice could call their own terms; also for speedy training of native talent, nothing like top men. The imports had a way of insisting on their usual pay envelope. They didn't expect Canada would pass them out postwar jobs as compensation

for lower wartime pay. The Board's plan for training local boys paid off. A check of the NFB's 550-member staff list last year revealed but one non-Canadian.

Another kind of criticism came from many civil servants. They lampooned the Film-boarders as a group decked in wierdly-hued slacks, eye-straining ties, a group who'd forgotten local barbers were entitled to a living. Film-boarders might speak English, French mostly, but some of their words shouldn't be let out of books. The Film-boarders domestic and foreign, found Ottawa didn't take to a colony of artists and craftsmen as casually as Paris, New York or even Montreal.

After ten years, capital folk take these Filmboarders more casually. Though you'll hear the odd wisecrack still.

But what about performance? Were the films of the "long hairs" any good?

(Turn to page 64)





HE heifers were in such good grass that it seemed too bad to take the whole little herd L out of the hills just to get in the black one that was springing. The black one would put up a fuss about leaving her friends, she'd try to cut back and hide in the brush, but Amy Lou decided she could get her all right, since she was riding Tailspin. She showed him the black heifer and they cut her out before she realized what was happening. When it came to her that she was being headed toward the corral while the others were staying in the high meadow, it was almost too late to do anything about it. A couple of times she tried to make a break, and each time there was Tailspin barring her way. He hurried her along in the direction of home, zigzagging this way and that. Working cattle was like a game to Tailspin; it was a contest of wit and quickness that he enjoyed as much as Amy Lou did.

While she had been riding fast, Amy Lou had forgotten her troubles, but now her worrisome thoughts came back again. Tailspin had an enormous amount to do with her troubles.

Amy Lou wore no engagement ring on her finger. Instead, she owned Tailspin. It had been a question of selling Tailspin and buying a ring, or giving Tailspin to Amy Lou for an engagement present. Amy Lou would a thousand times rather have the little bay horse than all the diamonds in the store. Almost, she would rather have Tailspin than anything else in the world.

She thought back to the first time she had seen her horse. Dell had him shut up in a box stall, and if Tailspin had been a captive deer or coyote he couldn't have felt more miserable at being imprisoned. He had grown up on the Reservation, and the colts were as untamed as any wild thing that was hunted or trapped. Dell had bought him from the Indians, and roped him and brought him home, and Tailspin had protested every inch of the way. He'd thrown himself half a hundred times, and battered his head on the earth; he'd run to the end of the rope and choked himself down; he'd got skinned up and rope burned until he was a sad sight to see. In the dim box stall he paced up and down, trembled and snorted. Amy Lou looked at his sweat-streaked coat that should have been glossy, at his eager, neat little head with the silver of a white blaze down his face. "Ah, Dell," she said, "let him go. We've no right to take away his freedom.'

Dell said, "Wait and see."

Amy Lou knew what would happen. Dell would go about the business of breaking him as no other man in the valley would do. Dell would take all the time there was. Slowly and surely the little brone would be finding out things about Dell, and about himself, and about life inside a fence. Dell would be talking to him, singing to him. And one day the bay pony would find himself completely Dell's and he'd be forgetting the sweet wild places in the hills, and the colts that he ran with there. He'd be finished so that the slightest touch of the rein on his neck would send him bounding in the right direction. He'd be a wise roping horse and a good cutting horse, too, if it took Dell 10 years to make him so. But the sad part was that he'd forget there was anything else he ever wanted to do, and he'd be just like the other ponies tied to the hitching rail in town.

And he wouldn't seem to care, and he'd never blame Dell. That was the worst of it. He'd trust Dell and love him, after Dell had tricked him and betrayed him into being a slave. Amy Lou didn't like that idea at all.

A wild one, some of the folks called her, and maybe they were right, but she wasn't wild in the way they meant. It was just that she wanted something, wanted something extra special that wasn't to be found in her valley or the hills that closed around it. She felt a little of what it was when Dell took her to the movies, and she had the feeling of it in the music when there was a rodeo dance. Then she had glimpsed it when she met Sandy.

Sandy didn't cause her to love Dell any the less. But she knew now that the way she felt toward Dell was an ordinary feeling, after all. Every child and hound dog in the valley loved Dell, and so did she. Dell had a way with every living thing, nothing could not love him. Like the wounded doe he had found and brought home and doctored her along until she forgot her hurt. She would have forgotten her hills, too, except that nature told her when it was breeding season. Year after year she came back to show Dell her fawns, and stay around his place until it was time to go off again. Amy Lou told Dell it wasn't right or natural to keep a deer hanging around like an old pet sow, but Dell had shrugged and said, "She can go, whenever she has a mind to."

Folks brought horses from everywhere for Dell to train, and some of them were colts that had been broken once, and spoiled. They were the hardest ones to teach. Amy Lou would perch on the corral fence and watch Dell work a spoiled colt, and wish

to heaven, just once, a colt would get the best of Dell. But none ever did.

Any other girl would be tickled to death to be promised to Dell. Amy Lou didn't know just when it came to her that she didn't want to be Dell's, after all. She had denied the feeling for a long time, but it had kept growing anyway, and then she had danced with Sandy after the rodeo.

Sandy didn't look like Dell; Dell was tall and stormy-looking with his dark hair and tanned face. Sandy was like a sunny day. He was taller than Amy Lou, but not a six-footer like Dell, and he had the merriest, most laughing blue eyes Amy Lou had ever looked into. She had danced with him a number of times, and once she looked up to see Dell watching her. He was looking at her with the same expression that he wore when he watched a newly-saddled bronc. A speculative, trying-to-figure-things-out sort of look. Amy Lou didn't like being looked at in quite that way.

SANDY was a nice kid. He followed the rodeos, riding bulls, but he wasn't rough like some professional riders. He picked up money here and there, and he talked about Pendleton and Cheyenne and Madison Square Garden. It was Madison Square Garden that made Amy Lou take notice. The thought of it was exciting beyond anything she had ever known. Now she thought she knew—she wanted to see the world. She wanted to follow the thronged highways. She'd like to look at a big city at night, watch the people, hear the sounds.

"I'd like to live," she said out loud, and Sandy looked at her and laughed.

"Okay," he said, "come with me and we'll both live."

She wanted to say, "All right, I will," but she didn't want to seem forward, so she laughed as if she thought he was joking, though she didn't know whether he meant it or not. And, just to throw him off the track, she flirted around with everyone, though she never could tease Dell that way. He only laughed at her. Sandy looked a little concerned.

He stayed in town after the rodeo. He borrowed a horse and came out to see her.

"Get on your pony," he said, "and let's take a little ride around. I'd like to see some of this

"I don't think I've got a horse to ride," Amy Lou told him. "I think Pop is going to use old Jughead today." (Turn to page 58)

F the many problems which continually beset the farming industry, that relating to the cost and quality of education for rural children is becoming increasingly serious. In the early days of settlement a system of small school districts, conveniently arranged on a community pattern, was founded on the principle of local autonomy and control, and was supported financially by a municipal school tax based on property. Local tax revenue was supplemented by a minimum of financial aid from provincial governments, which also exercised control of curricula and teacher training, through departments of education.

Since 1867 education has been a provincial responsibility, under the provisions of the British North America Act.
There is, therefore, no direct responsibility laid on the Federal Government to pay any portion of the costs of education in the provinces, notwithstanding that for many years past, money for educational purposes has been provided by the Dominion to meet educational needs of one kind or another. In western Canada, and especially in the prairie provincescharacterized as they are by predominantly rural conditions, sparse population and a severe climate-municipal govern-

ments have found themselves seriously handicapped financially, and the standard of education for farm children has suffered. Gradually, provincial governments have come to realize the necessity of more liberal provincial aid to education. The increasing complexities of present-day life, following on a rising standard of living, have placed additional emphasis on the necessity for equality of educational opportunity for all. Consequently,

the increase in provincial grants has been progressive, if slow.

The problem today centers around the future of more than 450,000 children of school age in the prairie provinces, who attend nearly 11,500 elementary and secondary schools. The yearly cost of operating these schools is in the neighborhood of \$60 million, of which provincial grants provide about \$15 million, the balance coming from local taxes, with some help from miscellaneous revenue. Thus, provincial grants provide for around 25 per cent of the cost of all elementary and secondary education, and municipal taxes the remainder. In Manitoba, the government provides about 28 to 30 per cent, though ultimately it is hoped to raise this proportion to a full 50 per cent.

Governments in the prairie provinces know from experience that they cannot count on buoyant, or even stable, revenues. Even under the most favorable conditions, prairie governments cannot meet the need for educational and other social services as well as the more urbanized and industrialized central provinces can. If equalization of opportunity for all Canadians is to be even approximated, it will be necessary to secure some revision of Dominion-provincial relations. In this principle, all the provinces and the Dominion

In the working out of this Dominion-provincial problem much rests on the ultimate ability of the provinces, especially of Manitoba and Saskatchewan, to lift more of the burden of education from farm land. The reassessment of land which has been under way in the prairie provinces will tend to remove tax inequalities within each province, and to provide municipal and provincial governments with a more realistic tax basis-but it cannot do much more.

have concurred.

Over wide areas, equality of educational opportunity for rural children does not exist. Not only is this true as between different school districts in rural areas, but it is especially true as between rural

Larger School Areas



Central office of the school unit at Humboldt, Sask.

Must Come

Only by joining together with others to form larger administrative units can the small rural school district hope to match the educational opportunity offered to urban children

by H. S. FRY



Above: The Cupar (Sask.) Unit Board in session. Below: Larger units permit well-taught vocational courses to suit the area.

and city schools. Here, the differences are so great that the disparity in many instances is shocking. Until recent years this disparity has been a commonplace in rural areas almost everywhere; and even now the exceptions are a small minority.

In 1946 this was true in Manitoba according to the Department of Educa-'... figures ... show that out of every 100 children entering our rural, ungraded schools, only 43 reach grade VIII. More than half drop out with a grade VI or VII standing. These boys and girls very rarely go back to school or receive any further formal educa-tion. . . ." In the rural schools only 63 per cent completed grade VI. The percentage of pupils who completed grade VIII in rural, graded schools was 69; in graded town and village schools 81 per cent, and in city schools 79 per cent.

About half of all the children enrolled in the schools of the prairie provinces are rural, but in the secondary schools, where nearly 80,000 are enrolled, the proportion of rural students is much lower. The reasons are not hard to find, and there are many of them. In too many farm homes, parents offer little or no encouragement to children to continue schooling. In many rural schools the

conditions are not such as to encourage a liking for school. Teachers are often insufficiently trained for their work, and about one out of ten is teaching on permit only. Trustees too often emphasize economy more than the education of children. Departments of education, in the past, have not always been very realistic in prescribing courses of study and have tended to cram all children, regardless of back-ground, temperament and outlook, into

the same molds.

The figures already presented point up the significance of the defects in rural education, but they leave out much that is pertinent. Some of the reports of school inspectors and superintendents in Manitoba for the year 1948-49 are revealing. One says that of the qualified teachers in his division, 44 were new to their schools; another, that 62.2 per cent of the teaching personnel in his division were new to their classrooms at the beginning of the year; and a third, that 23 of 40 teachers taught under special permit, adding that "differing teachers' tenure is one of the factors contributing to the inequality of educational opportunity." One inspector reported that during the year there was a preponderance of teachers lacking experience, and stated that "out of 148 teachers, 98 had been only one year in the district.'

In one division, with 85 schools in operation, 12 schools should be replaced, and the inspector felt that "libraries in general are inadequate; few school boards have any idea of the reading requirements of children." Another inspector reported that half of the one-room schools in his division had no well; and he lamented the fact that he had found it necessary to report to the trustees of 25 schools, the uncleanliness and unsatisfactory condition of outside toilets.

From one inspector's report however, it is

possible to obtain an idea of the extremes of educational opportunity to be found within a single division. This inspector was able to report as follows:

'A fair number of one-room rural schools, even some with old buildings, were kept in excellent shape. Property was kept up. Ample equipment was supplied. Grounds were beautified. Schools were painted inside and out, or covered over with neat, brick siding. In this class of one-room school we find auto-

matic stokers, thermostats, inside toilets, radios, gramophones, fluorescent lights, hot plates, water coolers, metal flagpoles, excellent flags, pianos in (Turn to page 80) good condition, ample

Good Management





Pays

by RALPH HEDLIN

N all countries livestock is basic to permanent agriculture. The products from a herd or flock help to maintain the fertility of the soil. The feed that is grown helps to control erosion. The farm management expert gets quite enthusiastic about the merits of livestock as a supplementary enterprise on a grain farm, because it permits the maintenance of an even labor load throughout the year, and permits utilization of the by-products of grain production. Added to these positive features is the further attraction that the livestock producer who knows his business can make some money out of the sale of his animals, can stabilize his farm operations and can keep his soil in the fields and so increase his cereal crop production, and make a little more money out of his grain enterprise.

If these arguments in favor of producing livestock are sound—and few would deny that they are —why is it that so many farmers raise virtually no livestock?

One reason that is popularly given is that income tax takes all the profit out of a livestock enterprise. If a man makes \$5,000 out of wheat production and makes an additional \$1,000 out of livestock production it is argued that the tax comes out of this amount. If he pays \$600 income tax the return from his cattle enterprise is considered to be only \$400. The two faults with this argument are that, in the first place, a relatively small proportion of the farmers in these provinces pay income tax at all, and in the second place it is not realistic to place all of the tax against the livestock. It would be more realistic to charge to the livestock enterprise only a part of the tax proportional to the part of the taxable income that comes from livestock sales.

Another reason that is popularly given is that farmers are making so much out of grain production that they are not interested in livestock. This argument deserves scant attention. In an article that appeared in the November, 1948, issue of The Country Guide entitled Revolution in Agriculture and written by David McFarlane, Professor of Agricultural Economics at Macdonald College, Quebec, it was indicated that net income per farm in Canada in 1947 amounted to less than \$2,000. This was less than \$1,250 per gainfully employed farm worker—somewhat more than half the returns gained by workers in manufacturing industries. It is impossible to argue that farmers are making so much money that they are not interested in the possible profits from a livestock project.

No final and authoritative statement can be made as to why farmers are not raising more livestock. It does appear to this writer, however, that the amount of labor required to raise a carload of cattle is out of proportion to the amount of labor required to raise a similar value of wheat. Production of cereal crops has attained a high level of efficiency in the use of labor. The mechanization of livestock production is in a stage of relative infancy. With a large tractor and equipment one man can work 20 to 120 acres of land in a day, depending on the particular operation to be done. The same man with a pitchfork can haul out half a dozen loads of manure in a day. The cost of the day's work is comparable. The work done is by no means comparable. This was quite serious when a man could be hired for from \$10 to \$40 a month. It is very much more serious when the services of the same worker cost \$75 to \$100 a month. When livestock production attains the level of efficiency that cereal crop production has already reached, and a man can produce the same returns per hour of labor in the stable that he can in the field, we should be able to expect significant increases in livestock population and sales, and some related easing of soil conservation problems.

THERE is no machine used in livestock production that does the job the self-propelled combine does for cereal production. Most barns and sheds are not built to permit effective use of the limited amount of machinery available.

Nevertheless quite a bit can be done to increase the efficiency of labor in livestock production. This can be illustrated by reference to the program and experience of John Hallett, Fleet, Alberta.

It happens that Mr. Hallett has large grain and livestock projects. He has title to 2,400 acres of land, of which 1,400 are improved, and he rents 640 acres of pasture. He normally runs a herd of about 300 head — Herefords — and feeds out 75 to 100 head a year. However, nothing that he does could not be done equally well by a farmer with 320 acres and 20 head of cattle.

One of the first factors Mr. Hallett considers important for

The picture on the left gives some idea of the quality and scale of the animals raised on this farm, and in the next picture Mr. Hallett indicates the growth of the cover crop by early August. The picture below illustrates the tree cover that reduces the necessity of buildings for winter shelter.

efficient production is the right quality of animal. It takes as much labor and more feed to raise a poor steer as it does to raise a good one. "The bull is 90 per cent of the herd," says Mr. Hallett. "If you want to go into the cattle business get a low-down blocky bull. Also get a quiet one. If animals are quiet and docile in the feed lot they will feed better and fit out better. If you get wild or nervous ones in the bunch get rid of them at once." Growthy, good-sized animals make more efficient use of feed than small animals.

The next factor of major importance is the breeding program. Mr. Hallett sees to it that the bulls—he keeps two—get plenty of exercise and the right feed. Exercise is particularly important in the winter. The only measure of production efficiency in the calf crop is the number of living calves that go into the winter. Mr. Hallett feels very bad if the number of calves is not at least 90 per cent of the number of cows that originally went into the breeding pasture.

The bull is turned into the breeding pasture on July 1 and comes out on the first day of September. Any cow that is not in calf is run into the feed lot that winter and sold. Mr. Hallett avoids shy breeders, because he refuses to bear the cost of boarding a dry cow for a year, and he does not like late calves. All the calves are weaned in November and the late ones never have a chance to be efficient producers.

IKE S. L. Berry, Lashburn, Saskatchewan, Tom Boyes, Kelvington, Saskatchewan, and other breeders, Mr. Hallett breeds his heifers as yearlings. He chooses the best and puts them into the breeding pasture when they are 14 to 15 months old. He gives them the best of care when they are calves and the winter they are rising two he runs them into the feed lot for the first two or three months to give them every chance to grow. All breeders who breed yearlings agree that they need special care. They breed at this age because it means that an animal is a boarder for one year less and the calf, at present prices, more than pays for the additional care required. Breeding yearlings is part of the program of keeping everything on the place producing. Selling dry cows at once is part of the same plan.

In most parts of the West-including Fleet, Alberta—a livestock producer faces the possibility of a feed shortage forcing the liquidation of his holdings. Mr. Hallett uses a technique that reduces this danger to a minimum. In (*Turn to page* 32)



Good Dividends

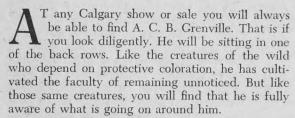
Good management and labor saving make market cattle profitable for this Alberta farmer by reducing his cost of production



Late Triumph

Arthur Grenville won high honors in middle age but the force of events drove him into an unexpected channel which he has navigated with equal skill

by P. M. ABEL



Art Grenville emigrated from England with that surge of homesteaders who filled up the West in the years immediately preceding the First Great War. Born in Devon, he moved with his family to a Suffolk farm while still a youngster. His father was a successful breeder and exhibitor of Suffolk sheep, and the lad's best days were spent with the farm

shepherd learning many precious tricks of the trade. Now grown to grandfatherly estate, Arthur Grenville will not approve of that statement, because he says there are no tricks of the trade. He combats the idea that it takes a skilled specialist to succeed with sheep. He believes that any man competent to care for other classes of livestock can learn the art of sheep husbandry easily if he will start on a small scale and be content with one step at a time.

However that may be, his father nursed other ambitions for Arthur who was shipped off as an apprentice to a draper-dry goods merchant to you. The pictures on this page will show whose idea prevailed in the

IMMIGRANT Grenville first settled down in the Munson district, west of the Red Deer River. He had the good fortune to commence his Canadian career on a quartersection of fine land. The clay soil was so heavy that bachelors had to be careful where they threw the wash water from the shack door lest they became marooned in a gumbo ring. One of Grenville's neighbors was his brother-in-law, P. J. Rock, who attained notable success farming this pro-

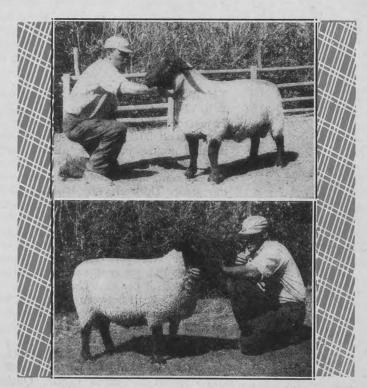
The homestead had one defect. It was too small for one of Grenville's energy and ambition. Expansion in that location was impossible, on the scale that its owner planned, so

he pulled up stakes and moved to the east side of the river, east of Morrin. It wasn't long before an ancient economic truth crept into Grenville's consciousness which states that a farmer's progress is apt to be as good as the quality of the land he farms and no better. The land on the new farm couldn't match the homestead land, although they were nearly within sight of each other. Over the

years it has yielded twelve bushels per acre, no record to boast of. But marginal land, fertilized by enterprise and managerial skill, can produce better than a marginal living, as Grenville proceeded to

The Munson-Morrin district was one of the first to form a local seed growers' association and Art Grenville was its first, and long-time secretary. He made his own beginning as a pure seed grower in 1923 commencing with Banner oats and Marquis wheat and for 20 years continued with those crops plus barley, sweet clover, alfalfa and flax. I suspect that the 12-bushel wheat average translated into terms of selling price might not look so bad.

The fierce droughts and blow years of the early



—while the generation between holds (above) Morrin 44B which sold for \$925 at the 1948 Salt Lake Sale, and (below) Morrin 46B which brought \$625 at the same sale.

thirties have gone into history. They assumed formidable proportions on this farm at an early stage while crops on the nearby, heavier land were still holding up. Grenville was literally driven to seeding grass to control drift. His common sense advocacy of grass for conservation caught the ear of Dr. L. A. Newman, then Dominion Cerealist. When the magic name of crested wheat grass began to be whispered about, Dr. Newman saw to



Grandfather and grandson, shepherds twain. Arthur Grenville rounds up the flock for The Guide photog-rapher, and Alfred Trentham exchanges confidences with "Joe," who familiarizes with no one else—

it that the first lot available for private sowing in Alberta got into the hands of this man of faith. They arranged between them that there was to be a big field day to which the neighbors would be invited to see the wonder grass, and listen to the gospel according to Grenville. He smiles about it today. That summer of 1931 was a scorcher and there was precious little to show. But crested wheat grass went on to fame carrying its prophet in overalls with it.

In 1933 the Canadian Seed Growers' Association conferred on him the greatest distinction within its gift. He was named Robertson Associate, an honor given to few, which commemorates the name of the founder of that organization. Subsequently he served as one of its directors.

That's all old history. I want to recount a story which had its beginnings when Arthur Grenville, had he been like most men, would have rested on honors already

I^N the fall of 1939, Grenville attended the Calgary fall livestock sale as usual. A ewe lamb was put on the auction block to raise money for the Red Cross. The price hung around \$15 for a long time. Grenville threw in a bid for \$16. In a twinkling of an eye he was the owner of his first sheep. It was a Suffolk from the Clarindale Stock Farm at Vauxhall, Alta.

There was, and still is, a lot in the sheep business to frighten a man of small resolve. Canadians are not lamb eaters, and the small demand for commercial stock puts severe limits to the development of a purebred business. Arthur Grenville knew this as well as anybody but he raised his sights a long way and took a sporting chance. He bought five more of the best ewe lambs he could get from Clarindale and set about building up a flock. By 1943 he was importing purebreds from one of England's premier Suffolk flocks, that of H. C. Hayward, Badley Hall, Great Bromley, near Colchester, Essex. With his first crop of lambs he launched forth on his career as a show-

From the very beginning Grenville has practised the most rigorous selection. He has a definite type in mind and has worked steadily toward it. He knew from his father's English experience that it is not simply a matter of buying the best foundation stock procurable and waiting for Nature to take its course. Champions do not breed champions. It requires the discerning eye of a shepherd to detect

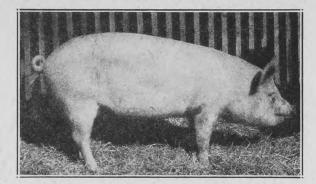
(Turn to page 52)

ORTUNATELY, the Canadian export and domestic markets both like quality bacon. They may cut the carcasses a bit differently, but both prefer the firm, lean bacon that comes from our trim, 200-pound bacon hog. There are also indications, with lard being more and more in surplus, that other markets will be interested in Canadian baconif not the finished product, then certainly in bacon breeding stock.

This Canadian bacon hog, produced mainly from Yorkshire pigs, is a good hog. It can compete with the best in the world, but what has been done in the past, and what is being done now to maintain or improve quality that is of importance to swine breeders? Do the methods of selection now followed provide for the mating of "best to best" in our foundation Is our present so-called "best" good enough? Finally, what is "best" in a breeding boar or foundation female?

These are questions which need review

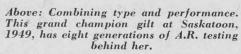
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Bacon Hog?

A review of hog breeding in Canada and some suggestions for the future

by J. G. STOTHART



Top left: This is the practical experimental piggery at Lacombe, 240 feet by 10 feet, divided into 30 pens, each with outside runs; and with a hexagonal pig brooder a

few feet away.

Center left: Inside the A.R. test piggery at Lacombe.

Lower left: Each lot of pigs has its own feed drawer in the test piggery and feed is carried by a practical homemade feed carrier, on an overhead track.

if the Canadian breeder is to take full advantage of future markets.

Hog grading was started in Canada in 1922. Prior to that almost every known breed of hogs was produced. Fat hogs and lean hogs; long hogs and short hogs; red, black and white hogs-all went into the production of pork. Since 1922 there has been a steady improvement toward better and better bacon hogs. Hog grading was the turning point in the story of hogs in

I^N 1923, the first year hog grading was in effect, Canadian hogs graded only 12 per cent Grade A. In that year Ontario hogs graded 20.8 per cent Grade A; but in the prairie provinces Alberta hogs averaged only 2.3 per cent, Saskatchewan 4.1 per cent, and Manitoba 6.7 per cent top grade. Thirteen years later, in 1936, the average for Canada was 24.4 per cent Grade A. Ontario hogs by that time graded 31.6 per cent Grade A, Alberta 22.6 per cent, Saskatchewan 16.7 per cent and Manitoba 17.1 per cent, with Quebec averaging 18.9 per cent, and the Maritime provinces 21.5 per cent Grade A.

In the 13 years between 1936 and 1949 several changes took place. The Canadian average reached a peak of 32.4 per cent Grade A in 1946, and dropped to 31 per cent in 1949. The average for the Maritime provinces rose from 21.5 per cent to 45.7 per cent in the same period. Quebec climbed from 18.9 per cent to 29.8 per cent, Ontario from 31.6 per cent to 37.8 per cent. Quality in the prairie provinces was much more erratic. Manitoba rose from 17.1 per cent in 1936 to 26 per cent in 1945, and dropped to 21.8 per cent in 1949. Saskatchewan rose from 16.7 per cent to 29.2 per cent in 1941, and gradually dropped to 24.5 per cent in 1949. Alberta, in 1949, stood a little lower than it stood in 1936. From 22.6 per cent Grade A's in 1936 it rose to 33.3 per cent in 1939, dropped to 23.9 per cent in 1943,

rose to 27.2 per cent in 1945, was down to 21.8 per cent in 1947 and had 22.2 per cent of its market hogs Grade A in 1949.

Hogs were graded alive until 1934, and during this period the top-quality hogs were graded "select." Both live and rail grading were in use from 1935 to 1940.

Prior to hog grading, certain sections of Canada were producing pretty fair bacon hogs. The general improvement afterward coincides mainly with the switch-over to bacon hogs in the West. Progress was steady up to just before the war, but since then it has not been as marked. Many factors contributed to the improvement during the period 1922-39. There were sow and boar placement policies sponsored by federal and provincial departments, bacon clubs, the Advanced Registry policy, and concerted extension directed toward the production of bacon pigs. During this period also, much valuable information on better feeding and management was put out by provincial institutions and the experimental farms. All these combined to promote improve-

The Advanced Registry policy, started in 1929, focussed attention on superior breeding stock as indicated by performance. More will be said of its contribution

WITH plenty of grain in his granaries, the western farmer, prior to 1930, used a wide variety of breeds to convert his grain into pork. In the '30's, when the premium on quality was high, the swing was naturally to more quality-better bacon hogs. Since then, more self-feeding has reduced the quality of western hogs, particularly in Alberta. It is also possible that the quality of the breeding stock has gone back a bit. The tops are still available, but in certain areas, indiscriminate crossbreeding has not contributed to maintenance of average hog quality.

Dean A. M. Shaw, formerly of the University of Saskatchewan and presently director of marketing services, Ottawa, and J. W. G. MacEwan, dean of agriculture at the University of Manitoba, and formerly at the University of Saskatchewan, published the results of their crossbreeding experiments at Saskatoon some years ago. They showed that the Yorkshire was definitely the best all-round bacon pig, and that crosses with the lard breeds did not produce very satisfactory results.

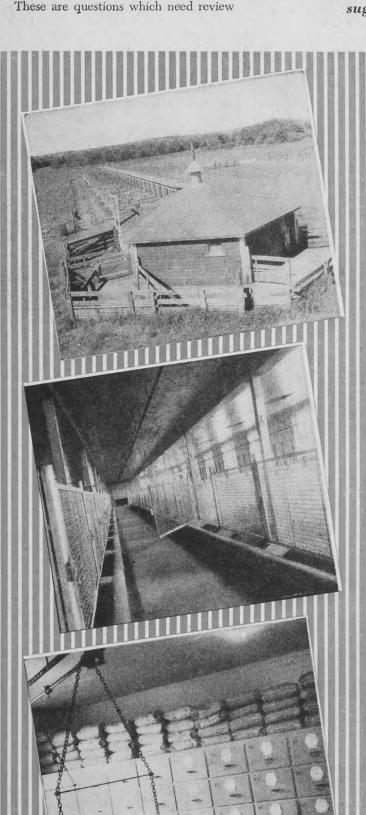
There is still some demand for Durocs and Poland China pigs in western Canada and the use of these undoubtedly has kept down the average per cent "A" grade hogs on the prairies. Colored hogs are wasty in the production of bacon. Many of them produce "seedy" bellies which have to be trimmed as much as 15 to 20 per cent in some cases, before going into the trade. This seed is a diffusion of pigment through the mammary glands and is very objectionable on the market. The trim is only good for rendering into lard and this naturally reduces the market value of the carcass.

Sun scalding is given as an objection to white hogs. In recent years, however, this has not been as serious as previously. Better management, through the use of shade and oil have helped materially; and it is also possible that acclimatization has contributed.

The trend is toward less labor in the production of hogs, and it would seem that the West needs a hog which, even under self-feeding, will produce quality.

What are the chances for such a hog and how can it be developed?

Breeding stock and especially foundation boars play a big part in any improvement program. A great majority of foundation animals, that is, boars and sows which make (Turn to page 44)





OUNG OBIE WYATT came home that afternoon round the hind side of the mountain, tramping a good four miles out of his way. He kept strictly to the timber and he was reading sign as he went, looking sharp for a slim, delicate print in the damp ground, or even a tell-

tale hair that might give rumor of a black fox having passed that way. But there was nothing, not even a smell, because old Poojer was with him and he had a nose.

Obie had paid good money for that black vixen, six hundred and fifty, hard-earned on the trap line.

Ma was stuffing flannel chinking round the window frames when Obie came in, stomping mad. 'Any sign?" she said, easy as if she was asking how the corn patch was coming.

"Nary a hair," Obie sighed. "Tramped the woods from Dan to Bersheba. She's likely clean up in Klamus county by now."

'I don't think so," Ma said.

Obie shot her a look. Ma knew a thing or two about the woods. She'd trapped with Pa, three or four years in this valley, share and share alike, and that took some doing.

"If there was only a mite of snow for trackin'," Obie said.

"Pity there ain't. Give you somethin' to do beside mopin' underfoot, suckin' your paws. Fetch me a pail from the spring.

Obie brought up water and set it on the stove. He sat down on the bunk, the tiredest, eternal maddest man you were apt to find. There he'd been, just ten days before, all ready to start his fox farm. He'd had his pretty black vixen in her tight-wired pen and had picked him out a black male to mate with her. Tina, he had called her, short for Bettina. Owning that vixen had put Obie in a class by himself, because raising black fox for fur, the rarest prize known to trappers, was the quickest road to riches in the Swiftwater country. Trapping men from clear north of Wing Dam had stopped by just to get a look at the vixen, worth four-five thousand in hard cash of any man's money. And there had been Bettina Starbuck, the prettiest girl in the valley, who had promised to marry Obie on his new fox farm, come spring.

THEN all overnight, the vixen was gone. Dug her way out under his deep-sunk wire fence, with a whole lot of help coming from something on the outside. Maybe another fox, maybe not; Obie

wasn't saying. But foxes didn't lift out rocks as big as niggerheads and lay them neatly on a dirt pile.

Ma finished her work. She filled her old pipe and got it going sweet. She offered the pouch and Obie rolled him a paper one. A peckerwood or something was going tocktock-tock out in the oak grove.

"So she won't see you," Ma said, out of the middle of a still spell.

"Who?" Obie yelled, knowing well.

"Never could abide them crossbred Starbucks," Ma said. "Only took this to show up the moult in their fur.'

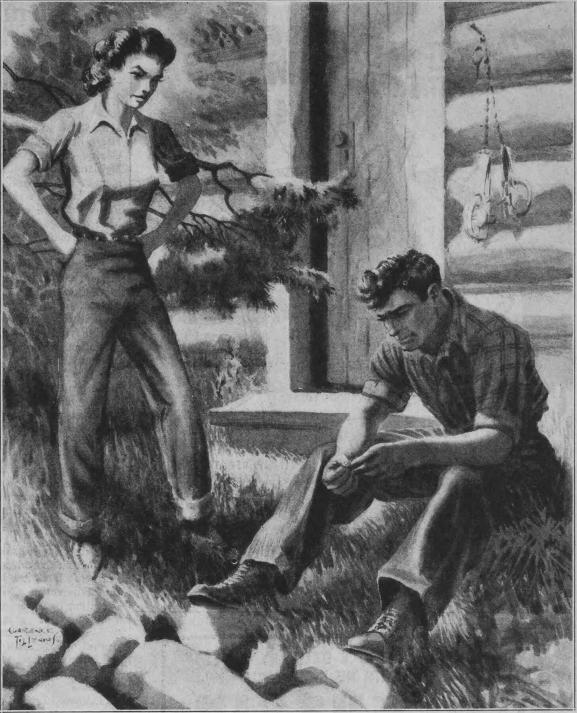
Obie had gone to town that day all primed up to spend the evening with Bettina, and tell her his new plans. But it turned out that Bettina had gone to visit relatives with her folks that night, and it had been the same two days before, but Obie had never dreamed Ma knew.

"If it's you, not the farm, she was fixing for, it'll show up soon enough," Ma said.

That kaid back Obie's ears and raised his fur. But he didn't aim to sound off in front of Ma. She hadn't taken on much about the vixen and he guessed he could stand it all as well as her. Like Ma said, the only good way to get another female now was to snare one.

There came a tock-tock louder than any woodpecker.

'Who's in the shed-house?" Obie said, getting up. "Poke. Who else? Best get your town pants off and get to work. Fur'll soon be prime.'



"She told you!" Poke managed a waspish, withering smile. "I'll bet you the first fox I take on the line that she will be at the dance."

Pretty as a Kit Fox

by PAUL ANNIXTER

Poke Miller told Obie that there was just one way to put Bettina's love to the test -jealousy—and offered to act as a foil. It was pride that sent Obie off to the dance in town

Obie went outside. If there was anybody he didn't want to see on this nadir afternoon it was Poke Miller and her coonhound. The dog was with her as always. He looked right at Obie, but had to go, "Yawmph, yawmph, yawmph" until his fool nose told him who had come up.

'So it's you," said Poke Miller through a haze of dust. "This place was ankle deep in trash. Hasn't been touched in two years, I'll vow. I couldn't stand the sight of it another day."

"What's the matter with your own place?" Obie asked ungraciously.

Illustrated by Clarence Tillenius

"Somebody's got to see to these traps, they're rusted. Rats have been at these straps and thongs. Now you're here you can pitch in and help.'

She was small, sorrel-headed and seventeen, attired in blue jeans, moccasins and a flannel shirt. She lived about a gun-

shot from the Wyatt cabin.
"Don't aim to do a lick," Obie said. He didn't intend to be bossed about today by a sassy slip of a girl he'd known since she was tad-high and underfoot. Since her mother had died Poke had had run of the Miller household and it was a caution the way she made them all stand around. Lately she'd taken Obje over as one of her responsibilities. She'd worn a path between their cabins checking up on him.

YOU can fetch me some oil for these clamps, at least," she said.

"Plague take the clamps. I got more'n rusty traps to worry about. I'm a ruined man.'

He sat down on the sill and stared gloomily down the valley. It was deep fall in the pine woods, sweet and lonesome and still, like holding your breath, except for the far courting calls of quail and an old cock partridge in the spruce bottom, drumming that he was papa. Those calls did Obie no good at all.

"It's terrible hard, I know, losing your black vixen," Poke said. "Have you hunted everywhere (Turn to page 86)



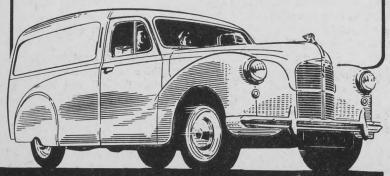


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Farm Highlights In B.C.

New minister of agriculture lines up behind price supports by CHAS. L. SHAW

BRITISH COLUMBIANS recently had their first opportunity to hear from their new minister of agriculture in his official capacity. Harry Bowman, who lives in the Fort George riding, was elected to the legislature for the first time last summer in the general election, and a month later he was chosen to replace Frank Putnam, who had resigned as head of the agriculture department.

In his maiden speech in the House the new minister showed that he appreciated the basic problems of the farmer, and he lost no time in placing himself on the side of those who favor a continuation of government price support for farm products. He said that the farmer asks no special consideration, but he was entitled to recognition of the fact that nearly all his (the farmer's) purchases were made on a market protected by high tariffs while he was obliged to sell in a market whose only regulation was supply and demand.

It was because of this situation that Mr. Bowman felt the government should see that agriculture was protected through adequate price support. He also expressed the opinion that Ottawa should help farmers with their irrigation and land-clearing problems.

During the session Mr. Bowman heard from the advisory board of the Farmers' Institutes that they favor establishment of a department of cooperation because such an institution would be of great assistance to primary producers now that wartime controls and assistance are being gradually removed.

The Institutes maintain that the proposed new department could coordinate and supervise all co-operative activity in the province, assist in setting up central agencies for producer control in marketing farm products and in arranging for exchange of commodities between primary producers.

Another suggestion of the Farmers' Institutes was to establish federal-provincial chemical boards across Canada to check soils and recommend types of fertilizers containing needed minerals.

While the government was being asked to do more in the realm of soil survey and nourishment, a natural resources conference in Victoria was urging a more definite policy of land settlement and colonization.

For all its tremendous area British Columbia's productive acreage in an agricultural sense is surprisingly small, and much of the land that could grow crops satisfactorily has to be reclaimed from the forest. The cost of land clearing has often been the pioneer farmer's toughest problem; it has driven many hundreds from the land.

William MacGillivray, provincial director of agricultural extension, believes that the government should help the new settlers by relieving them of the land-clearing obligation and doing the job itself. Mr. MacGillivray estimates that at least 6,000,000 acres of new land could be brought into production if this were done. Most of the new acreage would be made available in the central section of the province by having the government or its agencies clear from

60 to 80 acres on every 160-acre farm to be taken over for settlement.

Mr. MacGillivray told the conference that all its members already knew when he said that the day had gone forever when development of large areas of bushland could be achieved by new settlers with limited capital. Nowadays, and especially in a rugged province such as British Columbia, land clearing involves the use of costly, heavy, mechanized equipment if the over-all cost of the job is to be held within reason, and it isn't every small farmer that can afford such an operation.

Under the program outlined by Mr. MacGillivray, the land for settlement under such conditions would be free, except for surveying charges and improvements, and the initial payment would be 10 to 15 per cent, with the balance, at four per cent interest, amortized over 20 years. Available lands would be open for settlement on a priority basis-first to rural residents of the province and in order of preference to selected settlers from other provinces, the United States, British Isles, Netherlands, Switzerland, the Baltic countries and perhaps other European sources.

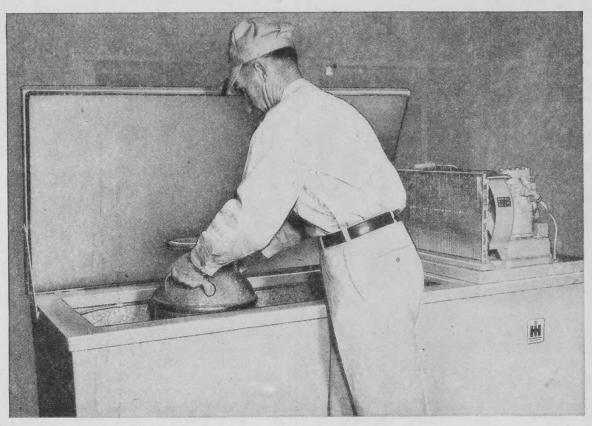
NDER present marketing conditions, the small farmer in many sections of the province may have a hard time marketing his produce at a profit, and this is sometimes used as an argument against encouraging settlement in the more remote areas. However, much depends on what is meant by "remote." The government is known to favor a plan whereby settlement will be carried out in blocks so as to reduce costs of development and maintenance and increase marketability of the community's production through standardization and volume. The individualist who wants to be alone and establish his farm many miles away from his nearest neighbor is not favored. For one thing, if there had been fewer individualists in the past the government would not now be saddled with the upkeep of so many roads serving a minimum of residents.

On the other hand, of course, the government doesn't want to discourage the hardy breed who enjoys battling with the natural elements and hewing his home from the wilderness. Such men have been the backbone of the principal farming areas of the province. But conditions have changed since there was a premium on that type of pioneer. Prospective pioneers are being urged to be community-minded and stick together.

Correction

The attention of The Guide has been drawn to the article on rapeseed oil in the February issue. The article stated that there were only two edible oil extracting plants on the prairies, but in addition the Co-op plant at Saskatoon and another at Fort William could be converted to this use. It would only be fair to add that practically all the linseed oil crushing mills in western Canada, and notably that of the Alberta Oil Linseed Company at Medicine Hat, could be devoted to this purpose.

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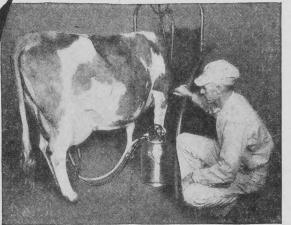




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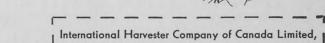
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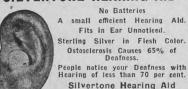
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News of Agriculture



Springtime evidence of "mixed" farming. Oxen are in frequent use in the Maritime Provinces.

Government Price Supports

I^N mid-March the Minister of Agriculture, Right Honorable J. G. Gardiner, gave notice to the House of Commons that the government planned to make permanent, subject only to the will of parliament, the Agricultural Prices Support Act and the \$200 million price-support fund set up under it as a transitional measure. This Act was passed in 1944 but did not come into effect until 1946 when supports for certain products, such as apples and potatoes, were found necessary. Since then the Act has been renewed from year to year, and during the whole period has required replenishment to the extent of between \$10 and \$12 million. At the present time the government is supporting the price of eggs, cheese, bacon and butter, with some prospect of further support for eastern potatoes and B.C. apples.

Farm Prices And Costs

THE rise of farm costs began to steady off in 1949. The index number of commodities and services used by farmers, published in January, April and August, 1949, by the Dominion Bureau of Statistics, showed a peak (composite costs, including living costs) of 192.3 in August. The 190 mark was first reached in August, 1948, after a steady and persistent rise, but since then costs have shown an inclination toward a seasonal fluctuation, though the drop in January, 1950, was still slightly more than in January, 1949, when the index number stood at 187.7. Costs in western Canada did not touch 190 until August, 1949, when the figure stood at 191. By January the western index had dropped to 185.7.

Farm wages have shown a tendency to drop during the past year. Daily wages of male farm help as at January 15 were down from the same date in 1949, though still up above 1948, except in the Maritime Provinces and Quebec. Fairly sharp decreases were evident in average wages per month, with board, in all provinces but Alberta, which showed an increase from \$76.67 to \$78.25. Monthly wages without board were down in all provinces except Ontario and the Mari-

Average values per acre of occupied farm land were still going up in all

provinces except Quebec and Saskatchewan. The latter remained at \$24 per acre, the lowest in Canada. Alberta showed an increase from \$31 to \$33 per acre and Manitoba from \$34 to \$36. For all occupied farm land in Canada, an average value of \$40 was reported by the Dominion Bureau of Statistics at the beginning of March.

Meanwhile, the index of prices received by farmers for agricultural products for January, 1950, has been estimated by the Bureau of Statistics at 239.3, which compares with 246 last December and 257.7 in January, 1949. It should be noted that index values for oats and barley since July have been influenced by the fact that only an initial payment of 60 cents per bushel for No. 1 feed oats and 87 cents per bushel for No. 1 feed barley have been taken into consideration. Participation payments which may be made later will be added to the initial prices and the index revised upward accordingly.

Production Trends

YANADIAN cattle numbers reached their peak in the December survey in 1944, at 10,258,000. By December 1, 1949, a gradual decline had brought numbers down to 8,243,000, of which 3,570,000 were milk cows-a slight increase. In the same period sheep declined from 2,822,000 to 1,235,000. Horses continued their steady decline from 2,886,000 in 1942 to 1,738,000 last December. The decline was uniform ranging from two to seven per cent in the provinces.

Wool production touched a high point in 1945 at 19,626,000 pounds, but was 9,835,000 pounds last year.

Total milk production in 1949 was up slightly over 1948, to 16,788,864,-000 pounds. Slight reductions occurred in the three prairie provinces and a slight increase in British Columbia. Of all milk produced, 30 per cent was used on farms, 35.1 per cent for fluid milk sales and 34.9 per cent in manufacture, of which more than 75 per cent went into creamery butter.

The numbers of poultry on Canadian farms on December 1 last increased by 6.8 per cent over the same date in 1948, to 42,443,000 head. Turkey numbers were upped 29.1 per cent. Laying hens, including



Now Chevrolet's world's champion Valve-in-Head Engine is highly improved, more powerful! Wherever you drive you'll reap its benefits — better economy, better low-speed performance, better hill-climbing, faster pick-up, faster Here's the car that has everything you want — that's right for you seven days each week!

Around the farm, you'll find that Chevrolet has outstanding power and stamina. Work this rugged beauty round the clock every day — your Chevrolet can take it!

And when it comes to all-road pleasure, there's no car in the low-price field that matches Chevrolet's riding and driving ease. It's designed, right from its wide-tread tires on up, to carry you and your family more miles . . . in more comfort . . . for more years.

Chevrolet for '50 is as handsome as it is powerful and sturdy, too. Every one of the eleven new Styleline and Fleetline body-types has a distinctively practical styling that is beautiful for keeps. They'll take the most rugged going — and still stay so good looking that you'll be proud of your Chevrolet for years!

Add up Chevrolet's advantages — compare Chevrolet's price. You can't help but agree that Chevrolet again is first and finest at lowest cost! See your Chevrolet dealer today.



FIRST ... and Finest ... at Lowest Cost!



Longest, heaviest car in its field, Chevrolet for '50 is really solidly built—even the muffled click as its doors swing shut tells you of Chevrolet's big car construction. And it's a great feeling to know that you have those proved Certi-Safe hydraulic brakes with rivetless linings.



Space where you need it when you need it—that's the roomy new Chevrolet for '50! Your passengers can really relax and stretch on those generous "five-foot" seats—spacious comfort that leaves you fresh at the end of a long trip. You'll like that giant-size trunk, too.



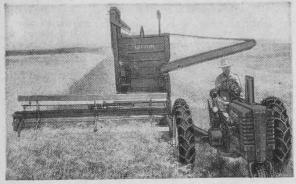
Unisteel Body by Fisher, Centre-Point Steering with Unitized Knee-Action ride, airplane-type shock absorbers, Panoramic Visibility—these are just a few of the big car features that combine to make Chevrolet for '50 a better-riding, better-handling, safer car than ever!



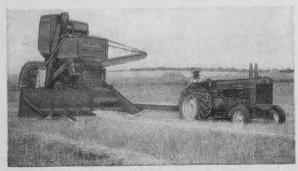
Good looks that last! New Style-Star Bodies by Fisher in sparkling color harmonies and new two-tone interiors make Chevrolet a durable beauty inside and out. And just wait till you experience the amazing riding comfort of Centre-Point Seating plus Unitized Knee Action.



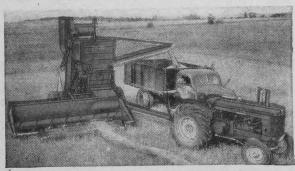
It's the new John Deere No. 65 Twelve-Foot, Pull-Type COMBINE for One-Man Operation



The No. 65 in heavy standing wheat.



Pickup Combining with the No. 65.



Grain tank empties standing still or on the go.

John Deere dealers will soon have the new John Deere No. 65 Combine on display. At your first opportunity, see this great new combine. After comparing it feature for feature with other combines, you'll agree it's the top pull-type combine value for the large acreage grain grower.

From the tractor seat, you alone have complete control of the tractor and combine. You raise and lower the hydraulically-controlled platform -operate the separator and grain tank throw-

You'll find the No. 65 is basically the same, from the platform on back, as the famous John Deere No. 55 self-propelled combine. Tremendous capacity in feeding, threshing, separating, and cleaning units insures big daily acreage and more grain saved. The 56 H.P. Hercules engine has power to spare in the heaviest crop, the toughest threshing. As in the No. 55, the engine is on top of the combine for better balance, greater field stability, and greater ease of servicing. Engine is regularly equipped with

The 45-bushel grain tank can be emptied standing still or on the go in 1-1/2 minutes or

Watch for your John Deere dealer's announcement of the No. 65-then see it!

JOHN DEERE PLOW CO., LTD.

REGINA, WINNIPEG, CALGARY, WELLAND

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same extent. Farm Cash Income High ${f I}^{
m NCREASED}$ income from wheat and livestock set 1949 farm cash

laying pullets, numbered 33,178,000 -down slightly. In the four western

provinces, Manitoba and Alberta were up slightly, and Saskatchewan and British Columbia down about the

income at a high level. The estimate is now \$2,456.9 million, less than \$3 million under the record income of 1948 and nearly \$500 million above the 1947 figure.

Ontario, as usual, led all provinces, this time with \$653.5 million, a slight decline from 1948. Saskatchewan and Alberta showed increases, Saskatchewan up about \$22 million to \$556.4 million, and Alberta up about \$8 million to \$460.2 million. Quebec was the fourth province in order, with

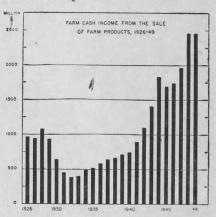


Chart showing the course income in Canada, 1926-49.

\$346.7 million and Manitoba fifth, with \$238.1 million, both provinces being down slightly from the year before.

The high income products last year were headed by wheat at \$464.7 million, followed by cattle, \$421.1 million; dairy products, \$350 million; hogs, \$326.3 million and eggs \$106 million. If, to the wheat income, is added the wheat participation and adjustment payments, the wheat figure is increased by \$211.3 million to a total of \$676 million. This puts the wheat income up \$110 million over 1948 and \$258 million over 1947.

Food Surpluses?

ANADA is a country of agricultural CANADA is a country, surpluses and of surplus food for export to other countries. Recently we have feared for our markets, especially the British market; apparently 'however, there is no need for any immediate fear of a surplus of meat. Not long ago the Rt. Hon. J. G. Gardiner, Minister of Agriculture, Ottawa, chided Alberta stockmen for shipping so many head of cattle to the United States market. He was quoted as say-"We are selling meat out of butcher shops today at a price as high as anywhere in the world. That is why our farmers should not be anxious to have their produce sold in any other part of the world. They should sell it here and have it eaten here. We are paying more for everything than any other country, includ-ing the United States, will pay for

Alberta, he said, had increased its cattle numbers during the war by nearly 600,000 head. In 1947 the province disposed of 423,000 head. Alberta farmers sold 532,000 head in 1948, and 527,000 head last year. He thought too much breeding stock was

being sold for beef.

About the same time a 60-year high in beef prices was reported in Regina, with T-bone steak at 80 cents a pound, sirloin 75 cents a pound, round steak 70 cents, and beef tenderloin at \$1.10 a pound. The records showed that 67,918 head of beef cattle had been shipped to the U.S. from January 1, to March 9, as compared with 16,347 head for the same period a year ago.

Canàdians have increased pork consumption from 39.9 pounds per capita in 1935-39 to 54.2 pounds at present. Some doubt is expressed as to whether Canada can fill the British contract for 60,000,000 pounds of bacon, in view of our heavy domestic consumption. As of March 1 it appears that with 38.6 million pounds of cheese in storage March 1, we will probably fill our British contract of 80,000,000 pounds.

We have no British contract for eggs, but storage stocks on March 1 were not much more than half of the amount in store on the same date a year ago. Butter is in surplus, with a probable carryover of about 20,000,-000 pounds at the end of April, unless domestic consumption can be increased or export sales materialize.

Canada cannot eat all her food, but events are proving that the domestic market is the biggest market we have.

Jobs For Graduates

I NIVERSITY students for the 1949-50 year numbered 68,950 in Canada, of which 16,797 are expected to graduate this spring. A total of 4,522 students are enrolled in postgraduate studies, of whom 1,376 will probably graduate. Universities in the four western provinces have 19,265 students and expect to graduate about 5,312.

This means that the 16,797 Canadian graduating students will be looking for jobs this spring. The largest group, by far, are the 5,561 graduates in Arts and Science, next comes 3,661 graduates in Engineering and Applied Sciences, of whom 39 will be graduating in Agricultural Engineering (Sask.-28, B.C.-11). Graduates in Commerce number 1,080 and next in number is Agriculture with 807. Of the Agricultural graduates the four western universities will supply 478, Ontario 206 and Quebec, 123.

Dairy Farmers' Campaign

ILBERT McMILLAN, Huntingdon, Quebec, President, Dairy Farmers' of Canada, has announced a nation-wide public relations and sales promotion campaign on behalf of the

Canadian dairy industry. Purpose: To build a strong market for dairy products, avoid embarrassing surpluses and keep demand and prices at healthy, prosperous levels."

Member associations have endorsed the plan of the Dairy Farmers of Canada, and the Associated Milk Foundations, as well as the National Dairy Council, have agreed to cooperate in the collection of a levy of one cent per pound of butter or its milk equivalent on all milk and cream produced in June of each year. The collection will be purely voluntary as far as producers are concerned, but all producers are encouraged by the dairy organizations to assist, by this means, in cultivating a healthy and developing market for their own products, by their willingness to support this comparatively small contribution.

U.S. Farm Troubles

THE Commodity Credit Corpora-I tion, which is the agency set up within the United States Department of Agriculture to handle the U.S. Government's price-support operations for farm products, has experienced a net loss of \$468 million from 1933 to the end of 1949. The CCC operates on a borrowing authority authorized by Congress, amounting to \$4.75 billion. Secretary of Agriculture, Charles F. Brannan, has asked Congress to increase this authority by a further \$2 billion, since by this spring the CCC will have tied up about \$4.3 billion of its present credit. The additional borrowing authority will be required very soon to support 1950

At present the CCC has invested \$2.7 billion in three commoditieswheat, cotton and corn. As at the end of January the agency had under its own ownership or loan program, 627 million bushels of corn and nearly 475 million bushels of wheat. Other commodities in which it held substantial holdings were tobacco, grain sorghum, soybeans, barley, linseed oil, flax, dried eggs, dried milk and butter.

The Secretary told Congress that "the purchasing power of farm families in terms of 1947 dollars dropped about \$2 billion in 1948, another \$2 billion in 1949, and could drop still another \$2 billion in 1950, if farm prices do not strengthen."

The government now holds over \$900 million worth of cotton, 86 million pounds of butter valued at more than \$50 million, and around 50 mil-



Wheat in Kansas. Part of the billion-bushel crop of 1949, about half of which



NEW! SPRAYMETER. Now at last, truly accurate spraying! Test run with new Spraymeter attached to boom shows in a minute exactly how much liquid per acre you are spraying. No more under or over spraying! And it's standard equipment on all Eco Sprayers.

NEW! SHUT-OFF VALVES ON **BOOM.** A feature you MUST have for spraying headlands, road allowances or strips where full spraying width is not required. Lets you shut off either outside boom . . . or both . . . of your Eco Sprayer.

NEW! COMPACT DESIGN. Ever see a sprayer that's so easy to get at . . . easy to operate? New, low centre of easy to operate? New, low centre of gravity gives you smoother spraying . . . less bounce. All parts . . filters, screens, etc. . . are ON TOP for quick servicing, less dust! And spraying is controlled right from your tractor seat. Available with engine drive or power take-off.



WONDERFUL TRACTOR MODEL TOO!

With the same grand sprayer as used on the trailer model. Boom mounts on ANY tractor. Oval tank fits closely behind the driver's seat to place weight well for-ward. Available with belt drive or power take-off. See it SOON!

ANOTHER EXCLUSIVE ASHDOWN PRODUCT!

Eco Weed Sprayers are made exclusively for the J. H. Ashdown Hardware Co. Ltd. by Service Station Equipment Company Limited. They're FULLY GUARANTEED!

NEW! EXTENSION HITCH

Here's new convenience you've wanted! Sturdy 11-foot hitch telescopes to 5 feet for close coupling to tractor when spraying. Let out to full length, you can quickly fold in both outside booms and hook them to hitch for fast easy moving to hitch for fast, easy moving.

NEW! IMPROVED ENGINE. Now the engine on your Eco Sprayer is equipped with oil bath air cleaner and sealed ignition. No more dust, no more moisture to hamper engine operation. Engine is mounted higher too . . . out of the dust!

PLUS ALL THESE OTHER GREAT ECO FEATURES! 30-foot, 1" aluminum boom pipe braced so it won't whip. Low gallonage Tee-jet nozzles. Quick-change filters. Bronze gear

LOW COST ATTACHMENTS! Extension booms quickly add 10 feet to give 41'6" to overall spray pattern. Hand Sweep Boom attaches to sprayer to get those hard to reach patches.

FOR PERFECT RESULTS!

DIAMOND A' 2,4-D

Ester or Amine. Gives great results in ANY liquid type sprayer. Guaranteed consistent strength. See your DEALER!



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1 how, when and where to use 2,4-D. Mail
uppn TODAY to ASHDOWN'S ... Winipeg, Rejina, Saskatoon, Calgary, Edmonton.

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MERCURY TRUCK5



Series M-215 Dump



Tough and Rugged Extra strength in every part keeps Mercury Trucks on the job.



Low Cost Operation Truck engines give more "Ton miles per Dollar." -type, 8-cylinder

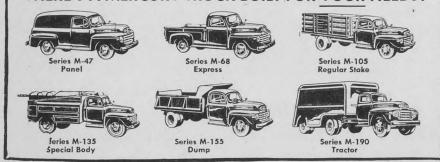


Priced with the Lowest Model for model, these quality trucks are priced with the



Coast-to-coast Service Right across Canada there's a Mercury Truck Dealer to serve

THERE'S A MERCURY TRUCK BUILT FOR YOUR NEEDS!



Move it with **MERCU**



RCURY MERCURY-LINCOLN-METEOR DIVISION TUNCOLN:

FORD MOTOR COMPANY OF CANADA, LIMITED

SEE YOUR MERCURY TRUCK DEALER

lion bushels of surplus potatoes, on which it expects to lose \$80 to \$100 million. Last year it lost \$30 million on peanuts.

Meanwhile the 1950 battle over the future character of U.S. farm controls is on. Secretary Brannan is fighting for his proposed plan, to allow farm prices to drop to open market levels and to make payments direct to farmers so as to maintain national farm income at a level calculated on the basis of the previous 10 years, payments being subject to the compliance of farmers with production controls designed to avoid the accumulation of surpluses.

Butter Versus Margarine

ECHOES of the margarine-butter controversy reverberated throughout Canada last month when the National Dairy Council, composed of Canadian dairy manufacturers, held its annual meeting at the Seigniory Club in Quebec. J. H. Duplan, retiring president, urged strong action against the heavy importation of foreign oils used in margarine manufacture. Arguing that unless this flow of oil was dammed up by tariffs and other means, the butter industry-and the Canadian economy as a wholemight face "economic chaos," Duplan said the butter industry affected the welfare of 17 per cent of the Canadian population involved in a \$600 million dairy industry. Claiming, already a \$50 million reduction in Canadian farm purchasing power, 20-million pound butter surplus held by the government, and an expenditure of \$10 million badlyneeded U.S. dollars for oils, he thought the consumer might be lured back to butter by a half-million dollar annual publicity campaign.

Other speakers saw no net gain to Canada from margarine and urged the Council to support a five-point program by imposing quotas on margarine, increasing the excise tax from eight cents to 15 cents per pound, imposing import duties on imported ingredients, preventing the use of a preservative, and prohibiting the supply of artificial color with margarine

packages.

Earlier, the Minister of Agriculture,

Rt. Hon. J. G. Gardiner, was reported to have told the Saskatchewan Association of Rural Municipalities that, if necessary, a campaign would be launched to prevent margarine manufacturers from flooding the country with margarine to the detriment of Canadian dairy farmers. He said he might put on a campaign himself to counteract margarine propaganda. Meanwhile, in Ottawa, private members were criticizing advertisements in eastern papers by the Department of Agriculture, proclaiming the superior qualities of butter. Sample: "Because there is a full quart of whipping cream in every pound of butter-no waste-you get more real food value for your money when you buy butter." The press reported a 30-cent price differential between butter and margarine on the day this advertising appeared.

However, early in March, Ottawa despatches had suggested that the present 58-cent floor price of butter might be reduced by the government to 52 or 53 cents in order to help clear the market of butter and bring the floor price more into line with the lowered support price of cheese. The government was trying to find an export market for at least half of its 20-million-pound surplus; and its advertising was no doubt directed to the domestic market, with the same end in view.

Meanwhile, in the United States, President Truman in mid-March signed a bill to end the tax on margarine of 10 cents per pound on colored margarine and one-quarter cent per pound on uncolored. These taxes produced \$23,927,191 in 1949 and \$14,128,616 the year before. Some of these taxes have been in effect for 64 years and include manufacturers', wholesalers' and retailers' taxes, ranging from \$6 per year for retailers of uncolored oleo to \$600 paid by manufacturers. Twenty-one states still prohibit the manufacture or sale of colored margarine. The new U.S. law will not affect state laws. After July 1, those who ignore a court order will be liable to fines up to \$5,000 per day. The American Senate passed the new law by 59 to 20 and the House of Representatives by 262 to 106.

Get It At A Glance

News briefs relating to the farm from here, there and everywhere

SIXTEEN farmers at Fort Sas-katchewan, Alberta, have been charged with delivering grain to a point not specified by their Canadian Wheat Board permits. The oats and barley involved were delivered to the McCabe Grain Company for what was reported to have been "a little better price." The grain buyer has been charged with receiving the delivery. Maximum penalty under the Act for both offences is \$300.

THE British Agricultural Machinery Mission to Canada has reported that British farm output on one-fifth of Canada's crop acreage is greater than that of all Canada. To produce this amount "more tractors and equipment are employed on British farms than on all Canadian farms together; and of the total British equipment, including tractors, almost 90 per cent is manufactured in Britain while only 25 per cent of equipment on Canadian farms is made in Canada.'

E ARLY in March, George R. Bickerton, well-known for many years in Saskatchewan farm organizations, died at his home in Saskatoon. President of the United Farmers of Canada, Saskatchewan section, for seven years and later research director, he was still with the organization (now called the Saskatchewan Farmers' Union) and was at work the day before his death.

THE Animal Science Department of the University of Alberta will hold its 29th annual Feeders' Day on Saturday, June 3. This event always draws hundreds of Alberta feeders and livestock men, interested in the results of feeding trials completed during the year.

P to the first week of March, Canada still had 49.4 million bushels of wheat to dispose of under the International Wheat Agreement, of her quota of 203,880,000 bushels.

THE total butterfat produced in New Zealand for the year ended June 30, 1949, was the second highest on record at 460,000,000 pounds, or an average of 261 pounds of butterfat from 1,760,000 cows.

MERCY flights are common today, but seldom involve farm livestock. In mid-March Trans-Canada Airlines transported a small threeweek-old lamb suffering from a rare form of paralysis, from a McGrath district farm in southern Alberta to the Ontario Veterinary College, Guelph.

ORIGINATING in Missouri, what is claimed to be a new American breed of sheep, the Montadale, has appeared. A cross between the Columbia and the Cheviot, the Montadale is said to resemble the Cheviot, though heavier, with a white, open-face and averaging 12-13 pounds of light-shrinking, long-staple wool.

THE International Wheat Council in March accepted Germany for membership in the International Wheat Agreement, with a quota of 67,140,000 bushels beginning in the 1949-50 crop year. Starting with the 1950-51 crop year, Canada will share in this quota to the extent of approximately 25 million bushels by 1952-53.

AST year Australia spent \$2,000 in L AST year Australia specific Property of the State of th to combat a pest of vegetables and fruit; and at the same time sold California a million tiny beetles which will be used to eradicate St. John's wort from 700,000 acres of badly infested land.

KANSAS farmer, Maurice Coover, got fed up with commercial bread. He thought that putting more wheat into bread would help lick the wheat surplus problem. Using 16 per cent more flour, a bakery was soon baking 75 per cent more bread than its all-time peak and selling it at five cents per loaf more.

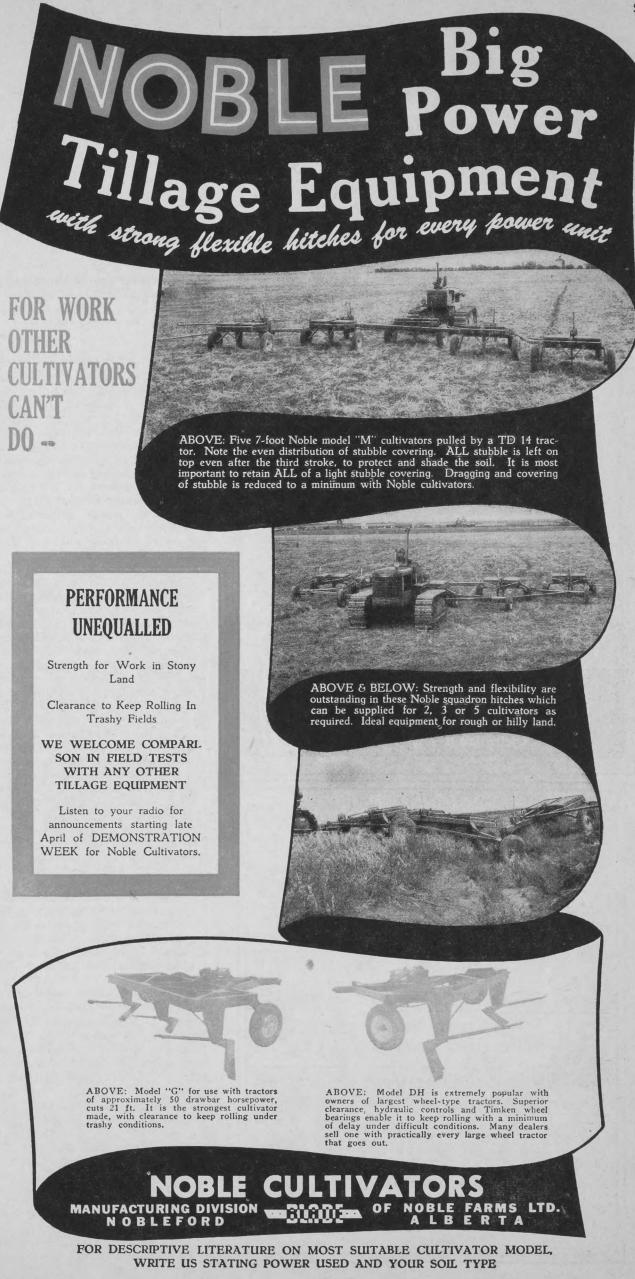
SEPARATOR company in A Sweden claims to have perfected a machine by which milk can be turned directly into butter. Milk is first reduced in the machine to 30 per cent cream and later to 82 per cent, after which a separate machine adds salt and solidifies the cream into a hard, close-textured butter.

UE partly to better feeding of Doe party to believe the home-grown feeding stuffs, 75 per cent more liquid milk is now marketed in Britain than in 1939. Sales of 1,459,000,000 gallons in 1948-49 were equal to the production target which had been set for the year 1952-53.

W. J. McINTYRE, Swift Current, has invented, according to the Regina Leader-Post, a hayless, oatless horse which will travel from five to 10 miles per hour, stand without hitching, and is powered by a six-h.p. gasoline engine.

IT is reported that the Saskatchewan Department of Agriculture plans to introduce hybrid corn into southwestern Saskatchewan this year under its forage crop program.

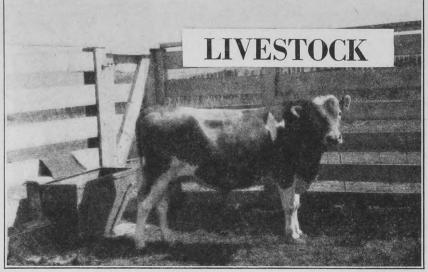
ARMERS and ranchers in the Swift Current area had good reason to appreciate the 3,000-ton hay reserve stored at the Swift Current airport last fall. With feed reserves gone on many farms, trucks hauled hay for 75 miles.







"The Bank For You"



This young fellow will not be "proven" until at least several of his daughters have completed at least one full, recorded lactation period.

Choosing Sires Is Difficult

CHOOSING livestock sires is a difficult process, which few individuals have mastered. Indeed, the animal scientists and geneticists do not seem to have been able as vet to work out precisely the most economical method by which their knowledge of animal breeding can be applied to all classes of livestock. If this is true to any extent at all among specialists in scientific animal breeding, it is infinitely truer of the commercial producer of livestock, and even of the breeder of purebreds.

The difficulties are perhaps best illustrated by reference to the problem in dairy cattle and poultry breeding. Poultry numbers, of course, multiply more rapidly than cattle or other classes of livestock. In most cases it is possible to measure daily, weekly, monthly or annually the exact production of the individual and to calculate economy of production by the same precise measurement of feed consumed; but the practical calculation of the ability of either a chicken or a dairy cow to transmit her good qualities is another matter.

It is known that certain qualities are dominant, such as the hornlessness of cattle, and that it is possible with the right mating to improve milk or egg production. However, the way in which a dairy herd owner should select a dairy sire, or for that matter the way in which any livestock sire should be selected, is not so simple.

We know that, in principle, half of the qualities inherited by a dairy calf, for example, will come from the sire and half from the dam. There are, however, innumerable characteristics which are inherited, not all of which have anything to do, necessarily, with the production of either meat or milk, for which purpose cattle are kept. The dairyman, therefore, is interested only in those properties which tend to influence high milk production, over the longest possible period in the lifetime of a cow, as economically as possible.

If we have a herd of, say, 20 cows, whose average production is 6,000 pounds, we will naturally want to increase that average if possible. The obvious first step is to look over the record of feed consumed and milk produced by each cow, and perhaps cull out one or two of the poor producers. The next step is to breed higher milk production into the herd by the choice of the right herd sire. This choice can be made by several

different methods. Far too many commercial dairymen buy a bull almost altogether on appearance. This is certainly a hit-or-miss method. Many select a dairy sire because his dam has made a creditable record. This method would probably produce one good bull out of each two selected.

The test of the bull's usefulness is whether his daughters produce more or less milk and fat than their dams. A study of the records of many hundreds of sires used in dairy herd improvement associations in the United States, shows that, on the average, about as many purebred bulls decrease the daughter's production as increase it. The records also show that the higher the average milk production of the herd, the more difficult it is to select a sire that will still further improve production.

Using sons of 500-599-pound butterfat proven sires, and out of 500-599-pound butterfat cows, seems to be the most desirable way to select a bull at the present time." statement was made by Dr. A. O. Shaw, Washington State College, at the recent convention of the Alberta Dairymen's Association, after a thorough examination of all existing dairy herd improvement association records. "Seventy-four per cent of these sons," he said, "had indexes that averaged 400 pounds of butterfat. This is three good bulls to one bad bull."

It would seem, then, that even with sires which are the progeny of 500-600-pound dams and similarly backed sires, the chances of a herd sire increasing his daughter's production over that of their dam's is only about three to one. To this extent is the great problem of livestock improvement complicated by the intricacies of inheritance.

Handling Piglets

FARROWING time will soon be here and here is the best way I have found to handle the little fellows when clipping teeth, or administering reduced iron:

Grab the little pig around the neck with three fingers between the jaw and forelegs. When he opens his mouth to squeal, place the first finger far back into his mouth, back of his teeth so he cannot bite or close his mouth. At the same time, apply enough pressure on his vocal cords with the second and third fingers so no sound will come, but allow him to breathe in freely so he will not

they ask--



Can rockets reach the moon?

Why is the sky blue?

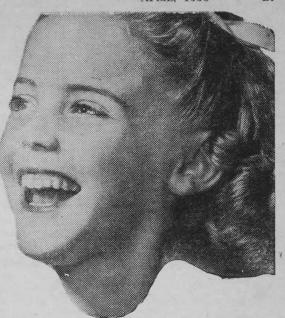
How does television work?

Why do I go to sleep?

What makes an echo?

Why is sugar sweet?

Why does a ball bounce?



can you answer

I WONDER WHY? ask boys and girls whose eager minds are opening to the busy life of the world about them. Who? What? When? Why? How? Your child asks questions about everything. Sometimes these are easy to answer, sometimes not; sometimes impossible. If you cannot satisfy your child's natural curiosity, you want to provide the means by which he can find the answer himself. To give interesting, satisfying and accurate replies to your child's questions, you can present him with no better gift than . . .

The Box a Child Can Ask — in Easy-to-Understand Form **Answers Every Question**

The ONLY and ORIGINAL BOOK OF KNOWLEDGE in 20 Volumes wholly printed and bound in CANADA

CLEAR - SIMPLE - ACCURATE

The Book of Knowledge is the creation of educational experts who have made a study of the mind process of the child. It is so clear, simple and accurate that the child grasps the fundamental facts of life and the world about him almost without conscious effort.

CAPTURES THE CHILD'S MIND

The Book of Knowledge captures the child's attention —and holds it—from the first page to the last. In thousands of homes it is the beloved tutor and friend, indoors and out—the best, the wisest, the most delightful and the most inexpensive work of its kind ever printed.

15,000 PICTURES THAT TEACH

Children love pictures—and The Book of Knowledge contains 15,000 educational illustrations—every one put there for a purpose. They teach the child the great facts of Nature, Science, History, Biography, Astronomy, Physiology, Art and Literature. Your child will never forget the important facts which these pictures make plain.

THE CHARACTER-BUILDER

No other educational source for the young has ever had so direct an influence upon the heart of a child as The Book of Knowledge. Its companionship is like that of a high-minded friend—stimulating, inspiring, entertaining and character-building.

AWAKENS IMAGINATION

Parents today seek help in the high and difficult task of educating for a practical, powerful and purposeful life those who are to be the world makers of the future. The 18 great Departments of Learning in The Book of Knowledge lay the foundation for a thorough education in the daily readings and occupations of childhood.

READERS ARE LEADERS

You want your boy or girl to be a leader—and Oh! how eager they are to live up to your ambition for them. You can make the road to success much shorter and happier by putting into their hands now—The Book of Knowledge.

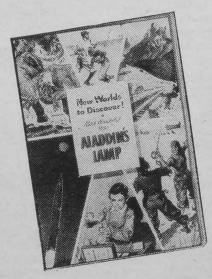
A great Educator says: "Suppose a boy of ten were to spend 15 minutes a day reading these pages. He would, at thirteen, know more about the earth and the life on it than the wisest men knew a few centuries ago."

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you would learn why The Book of Knowledge is your child's greatest opportunity—how it makes learning a delight—send today for this Free Booklet. It describes How an Atom Works, Curiosities of Other Lands, How Things are Measured, Riddle of the Sphinx, The Wonders of Transportation, Conquerors All, How to Make Simple Drawings, The Space No Man Can Measure, Safety First, The World and Its People, Tempting Candy Recipes, Birds, Butterflies and Fruits.

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smother while the job is being done. With a little practice, the whole litter can be treated without even flustering an irritable sow.-G. G. Wohlberg,

Animal Disease Inspection

SINCE 1903 Canada has possessed a national veterinary service. This service has been applied through and by the Health of Animals Division of the Dominion Department of Agriculture. The function of the Health of Animals Division is threefold: One, to prevent the introduction into Canada, by quarantine and other restrictive safeguards, of the more serious animal plagues and diseases, such as, footand-mouth disease, pleuro-pneumonia and rinder-pest; two, the control and where possible the eradication, of certain livestock diseases which exist in Canada, or may break out in the country; and three, to provide a meat inspection service to all plants and abattoirs engaged in interprovincial and export trade in meat products.

About 60 per cent of all livestock killed for food purposes is slaughtered at abattoirs and packing establishments where the meat is inspected by officers of the Health of Animals Division. These are the representatives of society who determine whether carcasses or portions of carcasses of farm animals shipped to market shall be condemned as unfit for human consumption. This inspection service is carried out at about 60 packing establishments throughout Canada, and for the year ending March 31, 1948, it was necessary for them to inspect the carcasses of more than eight million animals. In the process of doing so, they discovered carcasses or pórtions of carcasses which it was necessary to condemn for ninety-one different diseases or conditions.

Of these ninety-one categories, 31.12 per cent of condemnations in cattle were due to tuberculosis and 16.48 per cent to emaciation. With calves, 56.38 per cent of condemnations were due to immaturity and 23.26 per cent to emaciation. Swine examinations resulted in 33.91 per cent of condemnations being due to arthritis and 15.73 per cent to tuberculosis. With sheep, emaciation was important and accounted for 29.96 per cent of condemnations, while 19.09 per cent were due to pneumonia.

A great many of the diseases and conditions listed in the annual report of the Veterinary Director-General are not recognizable during the life of the animal, and only show up when the animal is slaughtered. Animals affected with tuberculosis seldom show evidence of disease during their lifetime, and sometimes veterinarians, after a careful post-mortem examination, need to resort to laboratory tests to arrive at a correct diagnosis.

About one hog in five in Canada is infected with tuberculosis. For the year ending March 1948, 2,510 hog carcasses and 1,750,000 portions of hog carcasses were condemned for this disease alone. Veterinarians assert that the cause of tuberculosis in swine is closely associated with T.B. in poultry. The logical conclusion, therefore, is that swine and poultry should be housed separately and the two not allowed to run on the same ground. For similar reasons the annual disposal of old hens at the end of the laying season, followed by thorough cleansing and disinfection of the poultry houses in the yard, is a valuable preventive measure. Canada's whole experience in controlling the health of domestic farm animals indicates that prevention is better than cure.

The Cost Of Low Production

N illustration comes from the A Dominion Experimental Station at Lethbridge of the economy of high milk production per cow. In the year 1948 the highest producer in the herd at Lethbridge produced 18,474 pounds of milk, which cost 97 cents per hundred pounds for feed. The profit returned by this cow over feed costs, was \$314. On the other hand, the lowest producer in the herd gave 8,874 pounds of milk in the same year and her feed cost \$1.43 per hundred pounds, so that as a result of her much lower production she returned a profit over feed costs of only \$92.

This rather striking example, which could be duplicated thousands of times if the facts were known, illustrates the basic factor in economical milk production. Milk is produced, first, on the inherited capacity of the individual animal to make milk; and second, on the ability of her owner or caretaker to feed her so as to utilize the maximum proportion of her inherited capacity.

In the case of the two cows at the Lethbridge station, it is to be presumed that both cows were fed and cared for with the same skill. If this is true, it is immediately apparent that the inherited capacity of the one cow to produce was more than twice that of the other. While the actual increase in milk production was 108 per cent, the increase in profit over feed costs was 241 per cent. In the one case the proceeds of 8,874 pounds of milk had to bear the full costs of maintaining the cow's body and health before any profit over feed could be chalked up; while in the other case this cost could be distributed over the returns from 18,474 pounds of milk. Had the costs for labor, housing and other items been added to the costs for feed, the amounts of net profit from the two cows would have shown a still wider difference.

T.B.-Free Areas

THE Province of Alberta would appear to be exceptionally fortunate in the low proportion of cattle

which react to the tuberculin test. A recent statement by the Hon. D. A. Ure, Minister of Agriculture, says that "although over one-quarter of a million cattle have been tested, an average of only two reactors per one thousand has occurred." Testing has been completed in seven municipalities and last fall an eighth municipality was declared a restricted area. The ultimate objective is to have the whole province a T.B.-restricted area, said Mr. Ure, "but for the present the intention is to complete a block from Edmonton to Calgary with existing restricted areas as a nucleus.'

All T.B.-accredited areas are set up under the authority of the Veterinary Director-General. If a municipality desires to become a .T.B.-restricted area, a petition to this effect must be signed by at least two-thirds of the cattle owners in a municipality. This petition then goes to the Provincial Minister of Agriculture, who, after approving it, forwards it to the Veterinary Director-General at Ottawa. When the latter has accepted the petition, the Dominion Department of Agriculture, through the Health of Animals branch, arranges for the testing of cattle within the area. When the testing of cattle in the area has begun, restriction of cattle movement is imposed. If the percentage of infected cattle proves to be more than one-half of one per cent, the municipality becomes a T.B.-restricted area. If, however, the testing shows less than one-half of one per cent of infection, the area becomes an accredited

Accreditation of an area is for one of two periods; three years, or six years. If the percentage of infection is between one-half and one-fifth of one per cent, the accreditation period is three years. On the other hand, if the percentage of infection is less than one-fifth of one per cent, or less than two animals per thousand, the area is accredited for six years.

Elastrator For Castrating

FOR a great many years stockmen have found it more profitable to mark lambs and alter bull calves not intended for breeding purposes. The result is increased meat production and improved quality.

Castrating and tail docking of lambs has always been a "chore, sometimes resulting in dead animals



Packaging processed cheese at the Dairy Pool, Saskatoon. At about 3.5 pounds per capita, Canadian cheese consumption is much lower than it could be.

following bleeding or shock. Some years ago in New Zealand a device known as an elastrator was developed for this purpose, because the many millions of sheep in New Zealand involved much time and effort in eliminating long-tailed, staggy lambs from the market, each of which might represent a loss of several dollars per head to the grower or rancher.

Use of the elastrator involves the application of a tight rubber ring above the testicles, by means of special equipment and specially-devised rings. The method is simple, clean and appears to be less painful than other methods.

Place Of The Self-Feeder

A LMOST any one of the provincial departments of agriculture, universities, experimental stations or agricultural representatives will be able to supply plans for the construction of self-feeders.

The self-feeder for livestock is designed primarily to save labor, a very important item in the cost of producing market livestock. Self-feeders, however, will justify themselves aside from the saving in labor, by permitting the pig, or other animal, to use its natural instinct for selecting the kinds and amounts of feed it needs. Experimental and research work has demonstrated time and again that domestic animals do have this selective capacity, when given the opportunity. Dairy animals and other livestock in a pasture field of mixed grasses and legumes will show distinct preferences, which, on the average, prove to be wise from the results in weight gains, or milk production.

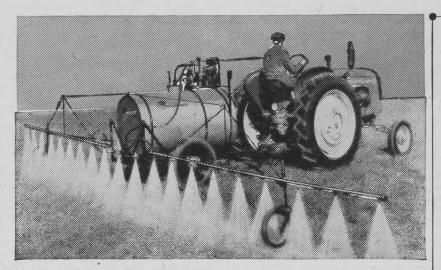
Successful use of a self-feeder, therefore, presupposes the willingness and ability of the owner to provide a suitable feed mixture, with smaller self-feeders from which the animals may get mineral supplements at will. It is probably true that in the hands of an expert feeder, hand-feeding can produce superior results in volume and quality, where labor is not the critical factor.

Commenting on the use of self-feeders, G. E. DeLong, Superintendent, Dominion Experimental Station, Lacombe, Alta., adds this advantage: "Roughage usually has to be processed by a cutting box or hammer mill before it can be self-fed to advantage in a ration containing both roughage and concentrates. The saving in roughage which results from processing with a cutting box or hammer mill is frequently sufficient, during one season's operations, to go a long way toward defraying the cost of the equipment involved."

It Pays To Weigh Milk

ALWAYS knew we had one cow that stood out from the rest at milking time, but beyond that I had given the matter little thought. We crushed whatever variety of grain we had available when we needed it, and morning and night we took a couple of pails of chop and a measure and dished it out to the fresh cows, mostly share and share alike. I read The Guide and the bulletins put out by the experimental farm folks, and from them I learned to mix salt, bone meal and ground limestone to supply the needed minerals, and, dishing out

NEW, IMPROVED COCKSHUTT SPRAYERS FOR SPEEDY ECONOMICAL COVERAGE



Tractor-Drawn Self-Contained Low Volume Sprayer Custom-Built for Large or Small Acreage

It's easy to wage war on weeds with the new, improved Cockshutt Self-Contained Sprayer. It's powered either by a 1½ h.p. engine, mounted on top of the big, sturdy 210 gallon tank, or by power take-off from tractor. Engine driven sprayer has a turbine type pump, and power take-off model a gear type pump with special speeder gear. Both ensure effective spraying and speedy filling of the tank. The tank can be easily and quickly removed and the chassis used as a handy utility trailer.

Floating Boom Stays Parallel

Both sides of the 33' spray boom are stiffened by ½' steel truss rods and balanced against each other by means of a common support cable. These features and two rubber tired support wheels combine to eliminate whipping and plunging. Safety spring release links permit booms to fold back if they meet an obstruction.

Non-Glog Spraying

Several features combine to prevent time-wasting delays caused through clogged spray equipment. The unique nozzle assembly made of stainless steel and non-corrosive brass is mounted inside the boom for improved filter action. This prevents nozzle damage and protects

The Good Farmer's Corner

Personally, when it comes to the spray itself, I always use Shell Weedkill 2,4-D. Both amine and ester types have a wetting agent for fast penetration and, as long as you stick to the instructions, they'll finish off weeds in short order without damaging grass or grain. And for controlling brush, Shell Brushkill-D really does the job

nozzles from sediment. In addition, you get five-point straining protection to further ensure trouble-free operation. At 20"-22" spraying height and dependent upon pressure and tractor speed, this nozzle assembly gives you a spray density range of 1.9 to 10.4 gallons per acre to meet varying conditions. The spray height is adjustable (10" adjustment in 2" steps).

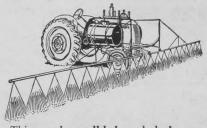
For Deep Cultivation in Hard Soil Use the Cockshutt "14" Cultivator

Experience has proved that the Cockshutt "14" Stiff Tooth Cultivator can take it where conditions are tough. Its rigidly braced rugged steel frame gives you unusual strength. Tools are mounted in three rows to provide exceptional clearance and prevent clogging.



You can work right up to growing crops, fences, etc., because the roller bearing mounted wheels are inside the frame. All sizes feature positive power lift and depth control. Available with either steel or rubber tired wheels. The Cockshutt "14" Stiff Tooth Cultivator is built in 9-tooth size for horses and 9-, 12-, 14-, and duplex (18-) tooth sizes for tractors. A Spring Tooth model known as the "14A" can also be supplied.

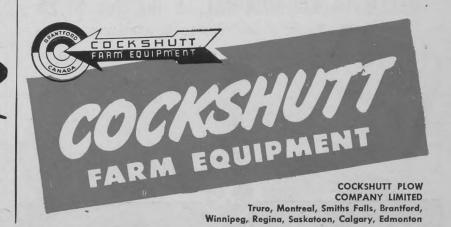
Low-Volume Tractor-Mounted Power Take-off Sprayer for General Field and Corn Spraying



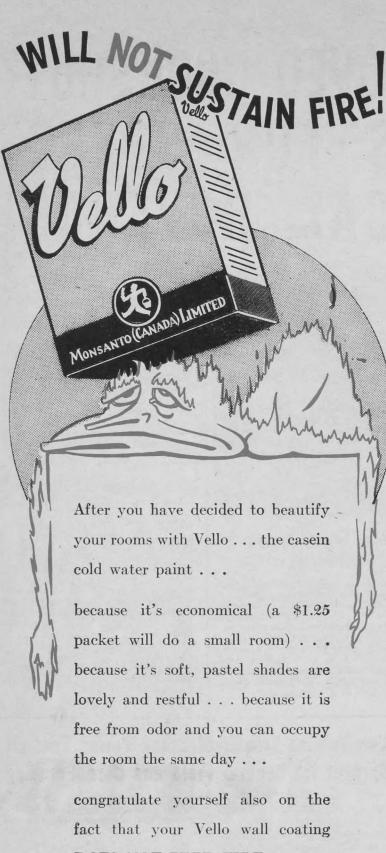
This popular, well balanced, dual purpose sprayer is designed to fit most standard tractors. Saddle tanks hold 46 Imperial gallons each and can be

easily removed to free the tractor for other jobs. Front mounted 2-section 33' boom is braced against whipping and plunging but safety spring release links permit sections to fold back if obstructions are met. Pump is operated from the power take-off unit of the tractor and is equipped with separate filler hose and three-way selector valve to speed filling of tanks. For transport, booms are readily folded and held in special racks to form a compact unit that is easily manoeuvered from one field to another or for highway travel.

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each animal a spoonful of this, I felt satisfied that I was doing all right.

Then came the war. Somewhere around this time, something urged me to weigh the milk. Once the idea took hold I found that there was very little to it and I wondered afterwards why I had not done it sooner.

We had two fresh cows in the flush of milk. It was early in June. The flies had not yet become troublesome and it was a good time to find out just what each cow was doing. I merely took a large sheet of paper and, backing it with a stiff piece of cardboard, tacked it up in the passage. I drew a line down the center, and to the left of the page and the line, at the top, I wrote each cow's name. I hung the weigh beam to the side, out of the way, then each day as I weighed the milk I put down the date and, opposite, the number of pounds of milk given by each cow.

At the end of the first 10 days, I found that our best cow had averaged 62½ pounds of milk a day, while her mate had averaged only 43-a difference of 585 pounds in thirty days. I was astonished. From then on I began to feed first more, then less, trying to find out just what more or less grain would do. I soon found out how far to go and when to stop. I saw the importance of trying to protect the cows from flies (DDT had not then made its appearance), and I found out in the winter, when the cows did not stay to drink enough water, that a good milk cow will pay you well for an extra pail of water carried to her later on.

Yes, weighing the milk taught me several things. I learned that the difference in value between a good cow and a poor one was a good deal more than I had thought. I learned the foolishness of the indiscriminate feeding of grain, and the value of a little added oil-cake meal. I found out, too, when I had reached the amount of grain ration beyond which there was nothing to be gained in going. And, lastly, I found out that the few minutes spent in weighing the milk made milking time an interesting business, when, before, it had been just another chore.—C. Richardson, Man.

Overgrazing Top Soil

SOME interesting experiments have recently been conducted at the Pennsylvania Agricultural Experiment Station to determine the effect of soil packing, arising from trampling by livestock. The aim was to find out the extent to which trampling of pasture or grassland, as the result of heavy grazing, increases the water run-off from the soil.

It was found that the percentage of water loss may vary from 0 to 80 per cent, depending on the intensity of grazing and the compactness of the soil. In every case overgrazed pastures suffered disastrously high run-off losses. Ungrazed areas had virtually no run-off. Moreover, the effect of soil packing from trampling was apparent in the first inch of surface soil.

Adding fertilizer to a grass legume mixture increased growth and enabled the soil to absorb more water, and consequently reduced run-off. A combination of manure and fertilizer was credited with holding 40 per cent more moisture in the soil and with doubling the rate of water penetration into the soil. On a legume-grass crop

which had not been grazed for five years, there was not enough water loss to register. After moderate grazing, however, a run-off amounting to 20 per cent was registered. After excessive grazing, water loss was 75 per cent

Good Rules Of Milking

In most herds there are some cows which let their milk down slowly. It is thought that this is a result of a slow release from the pituitary gland, of the hormone that is responsible for milk being forced from the cells in which it is manufactured, into the gland cistern.

A slow release of the hormone may result from bad milking habits. If too much time is taken in milking, many cows will adjust themselves to the situation by a very gradual release of the hormone, and they will have to be stripped for at least the remainder of the lactation.

There are a few good rules of milking, that it pays to follow. If heifers are handled carefully when they are first milked, they will come to like milking, and will respond by letting their milk down readily. Unusual objects or noises that attract a cow's attention may prevent a complete response.

Cows should never be treated roughly, particularly just before and during milking. Some people, even if careful, will create nervousness in cows, and so will never make good milkers.

Avoid washing or massaging the cow's udders, or stimulating the milk flow in any other way, until just prior to milking. Those cows that are known to respond quickly to the noises of the pails or milking machine are the ones to milk first. It is important to milk rapidly. The effectiveness of the hormone essential for the letting down of the milk will have partly worn off at the end of seven minutes, and if milking is not finished by that time it will be incomplete. Prolonged stripping will encourage slow hormone release, and is likely to make a stripper of the cow.

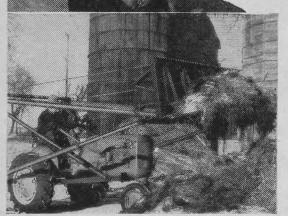
Increasing the vacuum or altering the rate of pulsations of the milking machine, from those recommended by the manufacturer, may make milking unpleasant for the cow, and result in incomplete letting down of the milk. Leaving the machine on the cow after the milk is all taken may damage the delicate membrane lining the teats. A careful operator can tell by feeling when the udder has been emptied of milk.

If cows that have udder trouble or mastitis are milked last, the danger of spreading disease from one cow to another will be reduced.

Complete emptying of the manufacturing cells is important. Otherwise because of the milk retained, a pressure is soon built up by the accumulation of the newly made milk, and the rate of making milk is lowered. In addition, the pressure may become so great that some of the substances in the milk begin to go back into the blood stream. When this occurs the drying-off process begins, and the cow will milk less. If the hormone is allowed to do its job well, manufacturing cells, ducts, and cistern will all be emptied of milk. If it is not allowed to do its job, the result will be lower levels of milk production.

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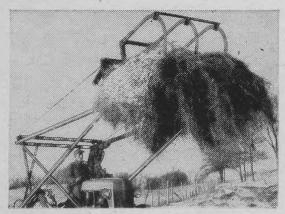
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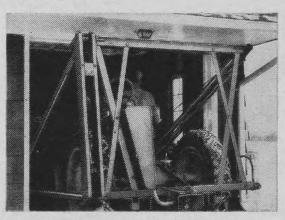
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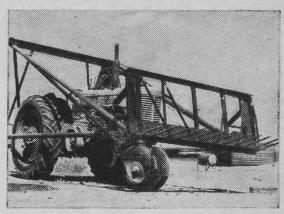
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. enables you to lift and steady big loads of loose or baled materials. Claw teeth clamp down with grasping action like human hand . . . prevent spilling and blowing. Spring back-stops hold ments in any position without loss of FARMHAND's famous "Wrist-Action" flexibility.



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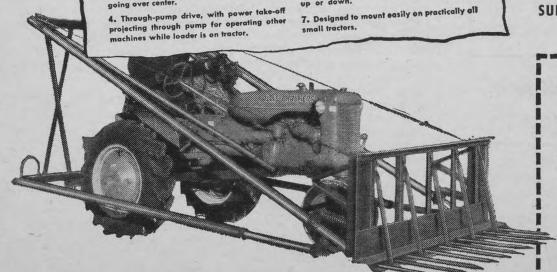
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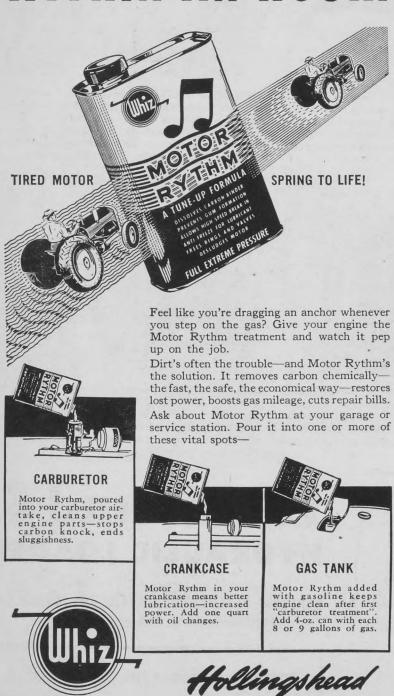
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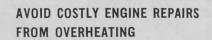
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Good Management

Continued from page 14

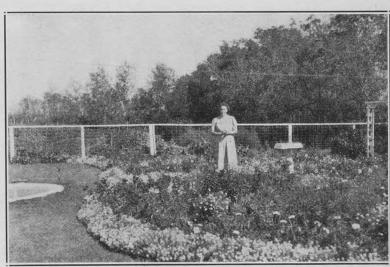
the first week of July he seeds his black summerfallow to oats, planting at the rate of 14 bushels to the acre. He sows 1½ to two acres to cover crop for each head of livestock on the place. This green feed attains full growth by October 15, if the frost lets it grow so long. After the first killing frost he cuts it with a binder, puts the sheaves in bunches of eight to ten (two sheaves wide and four or five high) and leaves them in the field. He neither stooks nor stacks. In the winter he picks the sheaves up in the field and takes them direct to the feed lot. If the snow gets very deep he rolls the piles of sheaves out with a team of horses and a small machine he has developed. He has been following this procedure for 20 years, and only twice has he been short of feed. On those two years he used the reserves of straw and grain that he keeps on hand.

This system gives good feed with a small labor charge against it. It also serves to check wind and water erosion, both of which have been problems in the district. Mr. Hallett is not satisfied that it has any serious adverse effect on the crop the next two years, and even if it has, the merits of the system more than offset this relatively small disadvantage.

You would expect that the calves would require shelter. However, the shed to which they have access is used so little that it has not been necessary to clean it for four or five years, and yet there is only about a foot of manure in it. Mr. Hallett feels that if cattle are left out they will develop a heavy coat and will not suffer from the cold-always assuming that they have shelter from the wind. Also, in his opinion it is important to have a breed that will develop a heavy, woolly coat. Incidentally, temperatures in the area have on occasion dipped to 40 and 45 degrees below zero.

The feeding program consists of grain and green feed, and a limited amount of straw, if green feed should be somewhat scarce. Store cattle, cattle in the feed lot, calves and horses get all the green feed they want to eat. Mr. Hallett has not found that it loosens them up. If plenty of oats is available the calves are fed two to four pounds a day from the time they are weaned so that they do not lose their baby fat, and when they go on pasture as yearlings they are well grown. They go into the feed lot as long yearlings in November.

Animals in the feed lot are hand fed for three months. During this time the bred yearling heifers run with them. The bred heifers are taken out



Mrs. Hallett in the garden made by co-operative family effort.

In the Claresholm district of Alberta a number of farmers seed their summerfallow rather later than this and use it for winter grazing. This is a technique that some farmers recommend in areas where winter grazing is a particular problem.

THE winter care of the cattle deserves very special attention, because, along with haying, it provides one of the biggest headaches in livestock husbandry. Mr. Hallett, like the Carlyle Bros., at Blackfalds, relies on windbreaks and avoids enclosed sheds that would have to be cleaned. The only manure that is forked on the farm is that from about 10 to 15 head in the horse and milk cow stable. He does not feed the cattle in mangers. The main herd is run out on a bushy quarter section and the green feed is scattered on the snow. No more is fed each day than the cattle will clean up. They are not fed in the same place each day so there is not enough accumulation of straw residues to kill out the grass in the spring. If straw is plentiful some bedding is done on the snow or in a shelter open on the south side. Even the sheds are not bedded

and the feeder cattle are given access to self-feeders. Feeder heifers normally go to market in March and April, and the steers follow in June. Mr. Hallett feels that he hits a relatively strong market by getting his cattle away during these months. There is a large element of chance in choosing the right market, but no one could deny that hitting a strong market is an important part of making some money out of a livestock enterprise. Mr. Hallett tries to make a good guess. All that he can hope is that he will be right more times than he will be wrong, so that on the average through the years he will be ahead a little by gauging the market.

Mr. Hallett is very conscious of the need for feed reserves if a stable enterprise is to be built. All oats and barley are cut with the binder and threshed, and the straw that is not fed is kept as a feed reserve in case of emergency. He also saves straw behind the combine. He has built a box on the back of his self-propelled combine. The combine leaves the straw in stacks six by six by eight, which he later picks up with a hydraulic lift and stacks. This is kept as a bedding reserve. By

maintaining these stacks and a bin of grain, he is fairly confident that even though he may have to reduce the herd, he is never likely to have to liquidate it entirely, nor likely to have to let cattle go to market in poor condition because of an unusually dry year.

Mr. Hallett uses machinery in order to reduce the back-breaking labor that usually goes with livestock production. His chief secret, however, consists of management practices that reduce labor to a minimum. He has done away with haying on the farm and replaced it with the much simpler operation of harvesting green feed. The reliability of his feed supply and the amount of feed he can raise through cover cropping has permitted him to increase his herd from 100 head up to 300. He has done away with the necessity of cleaning stables, and he has greatly simplified the winter feeding program.

All of these management practices combine to make it possible for two men to do all of the winter work that is required for the herd by working an estimated six or seven hours a day. When men can work this efficiently in raising livestock, it starts to become possible for a livestock program to take a positive place in a farmer's plans as a form of production in which he can get a return for his labor that will compete favorably with cereal crop production.

A Paying Pest

Rabbits are a liability to most Australians, but to some they are an asset

THERE is no love lost between rabbits in Australia and farmers in the same country. Rabbits are so numerous in this distant land that they eat a lot of livestock feed.

Recently rabbits have been going back to the United Kingdom from which their antecedents originally came. An annual export of 30,000,000 bunnies are finding their way into the British larders. A small packing company in Liverpool, New South Wales, is currently filling an order from the British Ministry of Food for 5,000,000 cans of rabbit meat.

Rabbit products are also finding a ready market in the United States and are earning much-needed American dollars for Australia. A large part of the fur felt used in men's hats in the United States comes from the Antipodes. This trade developed during the war when European sources of

supply were cut off.

There are several attitudes to this trade in Australia. Those who are selling the rabbits are satisfied with it. Farmers argue that if the rabbits were eliminated - supposing it could be done-they would be able to produce beef and mutton on the fodder the rabbits eat to a greater value than that of all the rabbits combined. The government, on the other hand, legally frowns upon rabbits and upon trade in them. Federal and State legislation demands that farmers eradicate rabbits as "pests," and technically "rabbit farming" is now on the list of "non-permissible" industries. Officially the industry does not exist, yet the government taxes it like any other, and at one time put an embargo on the export of rabbit skins in order to give local industries a chance to share in the harvest.



Prairie farmers report increased yields of 4 to 6 bushels per acre due to killing out weeds with HERBATE 2,4-D. Yet as little as 36% worth of HERBATE is enough to treat an acre :.. an average cost of only 7% to 10% per extra bushel.

Weeds are profit-thieves. They rob growing grain of moisture and plant food, reduce your yield, increase dockage.

HERBATE 2,4-D makes weed control easy and economical in both time and money.

HERBATE 2,4-D kills sensitive weeds outright, keeps even the more resistant ones under control, resulting in increased yields of 4 to 6 bushels...sometimes even up to 10 bushels per acre.

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Because of HERBATE'S high 2,4-D Acid content, as little as $\frac{3}{8}$ to $\frac{5}{8}$ of a pint assures effective control even in heavy weed infestations. That means an average cost of only $36\cancel{e}$ an acre.

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WITH OTHER BRANDS

When you buy 2,4-D weed killer, see first how much 2,4-D Acid (in ounces or pounds per gallon) it contains. Read the label carefully and compare the 2,4-D Acid content of HERBATE with other brands. It's HERBATE'S high 2,4-D Acid content that makes it so effective and economical.

HERBATE 2,4-D

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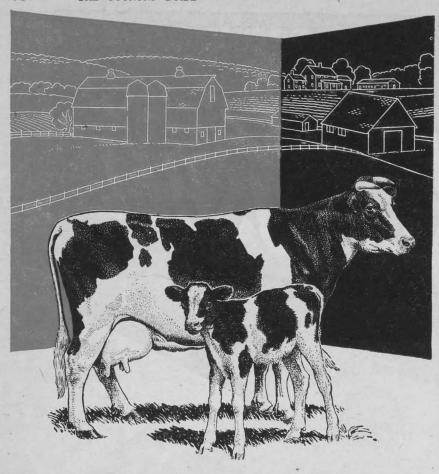
HERBATE 2,4-D is a product of the Agricultural Chemicals Division of CANADIAN INDUSTRIES LIMITED, Canada's largest manufacturer of chemicals and long established leader in modern pest control products. Branches in Winnipeg, Regina, Calgary, Edmonton, Vancouver, Halifax, Montreal, Toronto and Chatham, Ont.

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Fever, Metritis and Foot Rot

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One prompt treatment with SULMET Sulfamethazine Lederle frequently restores normal temperature and overcomes infection in an animal suffering from an acute bacterial disease. If additional treatments are necessary, they need only be given once a day.

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SULMET Sulfamethazine is available in six dosage forms: POWDER, TABLETS, OBLETS*, EMULSION, SOLUTION 12.5% (for use as a drench) and INJECTABLE SOLUTION on veterinarian's prescription.

For maximum efficiency in the use of SULMET, as well as for best management practices and disease-control procedures, consult your veterinarian. Read carefully the circular enclosed in the package for *best results* in the use of this product.

*Reg. U. S. Pat. Off.

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FIELD



Over the hill to spring and seeding—the season of hope for the farmer.

Friends Of The Land

In the United States there is an organization the name of which is "Friends of the Land." Its membership consists of people who believe in the land and in its importance to society. They believe in the land as essential to the support of life itself, a vast treasure-house of materials from which mankind can, if we will but preserve it and develop it as a vital resource, draw indefinitely for helpful sustenance. They believe that society has created conditions which have led to abuse of the land, to loss of fertility and, indeed, to the wastage of huge quantities of the soil itself, from erosion by both wind and water. They believe, in fact, that a good farmer is a friend of the land who studies his soil, nourishes and tries to understand it—who is, in fact, a caretaker and a builder instead of a wrecker and destrover.

We need more friends of the land in Canada, more people who are farming because they like it and who show a real regard for the land they till by preserving its fertility and preventing its wastage. We need more people who realize the fundamental relationship between livestock and the land, between the soil and crops such as the legumes and grasses, which help to maintain the organic content of soil, and from which the growth-promoting and the health-promoting humus is developed, with the aid of the many forms of life known to live under the surface.

We need more people on farms who have tried to understand the many services which the roots of plants perform, in addition to supporting the plants they help to feed. Roots help to aerate the soil, increase its waterholding capacity, improve its texture, and encourage the increase and activity of bacteria and insect life, as well as the beneficial earthworm. We need friends of the land too, so that there will be more people who will find farming a pleasure and a joy, instead of a mere back-breaking occupation. Such people will be the first to realize the farmer's responsibility, not only to care for and improve the soil, but to produce as much food as possible from every acre of it. What is needed is to apply the same spirit to an acre of which a first-class stockman applies to a valuable purebred animal; to nourish it, watch it, handle it and feed it with the object of developing it to the very best possible advantage.

The farmer in western Canada, and particularly in large parts of the prairie provinces, is offered a challenge and a responsibility which is too often neglected. We grow a great deal of wheat and other grains partly because much of our land is adapted to these crops, but, also partly because it is the easiest thing to do. It requires no particular intelligence to seed a hundred acres of land and wait for the harvest. What does require intelligence is the management of such land so as to conserve the maximum amount of moisture, to seed the most suitable variety, to prepare the soil for the seed in just the right way, while at the same time preserving the texture and fertility of the soil, so that its average yield will gradually increase, or at the very least be maintained.

A Dangerous Chance

WHEN a car, truck or tractor is warmed up inside a closed building, or if the door of the building is opened up too little to permit an adequate air circulation, the operator of the equipment is asking for trouble. The trouble comes from the accumulation of carbon monoxide in the closed area, which leads to carbon monoxide poisoning and death of the operator, unless the victim manages by some miracle to escape in time.

Too many such accidents still occur and C. A. Cheshire, extension agricultural engineer, Alberta Department of Agriculture, recommends a periodic check-up of exhaust pipes and mufflers. These parts may allow the gases to escape into the cab of the truck or the body of the car, with serious results. When a vehicle is standing still with the engine running, this leaky condition can be very dangerous.

Even more serious, because more numerous than the carbon monoxide poisonings, are the general run of tractor accidents. The modern high speed tractor is often used unnecessarily at dangerous speeds. Mr. Cheshire points out that with the modern high-speed tractor, many operators rely to a large extent on individual wheel braking to assist in steering. This, he warns, tends to tip the tractor and should be avoided unless absolutely necessary. Also the decreased rolling resistance of the modern tractor encourages accidents when the tractor is hitched to an implement on uphill grades, without applying the brake or using a block.

Another cause of tractor accidents is failure to shut down the engine before refueling.

Prepare For Grasshoppers

A LL the authorities are now agreed that western Canada may expect one of the worst outbreaks of grasshoppers in 1950 ever experienced. Provincial departments of agriculture are making extensive preparations to facilitate an effective and hard-fought campaign against these pests. Several new chemicals are expected to be used this year, not necessarily for the first time, but for the first time in western Canada in any large amount.

Municipal offices have all been warned to organize well in advance within their municipalities. Farmers have been warned, especially in the districts most heavily infested; and all the resources of the entomologists and those who work with them will be thrown into the battle to prevent more than the minimum amount of damage to crops.

Very heavy infestations have been observed in stubble fields over fairly wide areas. In many cases this probably means that such land should not be cropped in 1950, but should be summerfallowed; and that where infested land is cropped, the crop should be put in as early as possible, with provision for guard and trap strips on all summerfallow land. Treating these strips early and frequently with chemical sprays or dust will probably help considerably, but much can be done by careful cultural practices. Of these, early surface cultivation of all infested land is one of

Visit Or Write A Letter

FARMERS are often too reticent, or neglectful, about seeking information on farm problems, which is available at the cost of a four-cent stamp. There are a surprising number of places where it is possible to write for reliable information. Whether it be about what variety of grain or forage crops to seed in a particular district, or tillage methods for a particular crop, or the feeding and management of livestock and poultry, or any of the diseases of plants or animals, there is some place in the prairie provinces where someone is employed either by the provincial or dominion governments to answer these questions.

Where it is convenient, the best and most logical way of finding out, is to consult your own agricultural representative (district agriculturist). His office is probably not more than 20 or 30 miles from you, wherever you may live, because there are between 75 and 100 of these representatives located in the three prairie provinces alone. The provincial departments of agriculture at Edmonton, Regina and Winnipeg have staffs of interested and well-trained persons, who are qualified either to answer your question directly, or to get it answered for you. There are experimental farms and stations at Prince George, Summerland and Saanichton in British Columbia; Beaver Lodge, Lacombe and Lethbridge in Alberta, in addition to the range experiment station at Manyberries; at Scott, Swift Current, Melfort and Indian Head in Saskatchewan; and at Brandon and Morden in Manitoba. There are provincial universities in all four provinces, with departments in almost every field of

agriculture equipped to answer almost any question you may have. These universities are located in Vancouver, Edmonton, Saskatoon and Winnipeg.

Under these conditions there can be very little excuse, except negligence, for not obtaining a reasonably prompt answer to almost any question about your farm, which an outsider might be expected to answer.

Drill-Row Spacing

FOR a great many years, standard spacing of grain drill rows was six inches, but 40 years ago, the Experimental Farm at Dominion Brandon recalls, the hoe drill in common use mounted a seven-inch spacing, which is the interdrill width of the press drill widely used today. Many farmers still question the advisability of purchasing a drill with seveninch spacing.

For many years, the authorities at Brandon state, experiments were conducted on the spacing of grain drills. The results indicated that the yields were consistently equal between six and seven-inch spacing. "In fact," say "when the same per these authorities, acre rate of seeding was used for all spacing, rows nine, 10 and 12 inches apart gave as high yields as six-inch rows, provided intertillage was carried out to control weeds.

While experimental results indicate little or no difference between drills placed six and seven inches apart, it is suggested that in some cases the stubble in rows seven inches apart may give somewhat less support to grain in swaths than the denser stubble in narrow rows.

Know Your Weeds

T is important that a farm operator T is important that a should know the weeds that infest his fields. Familiarity with the weeds will aid in control, as he will know whether they are propagated most readily by seed or spreading root systems. He will also know something of their persistency when competing with cultivated crops or subjected to cultivation.

The successful use of 2,4-D and other herbicides is largely dependent on the type of weed under attack, making the need for accurate identification even more immediate. Weeds differ in their susceptibility to herbicides, varying all the way from common mustard, which is very readily controlled, to common buckwheat, which is almost resistant.

Excellent publications on weed varieties are available. They are normally distributed, free of charge, by provincial departments of agriculture, universities, experimental farms and agricultural representatives.

Range Management

THE normal use of a plant will not cause it undue injury. Due to its physiological make-up grass suffers less from grazing than do shrubs. It has in fact been shown at the Dominion Range Experiment Station, Manyberries, Alberta, that light grazing actually stimulates the growth of grass, so that more pounds of vegetative matter are produced per acre on grazed land than on land that is not grazed. It has also been proven that more nourishing and less fibrous forage is produced by frequent harvesting, even though the yield may be slightly smaller.

This is not to suggest that over-

"DUST OR SPRAY YOUR WEEDS AWAY"

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 $\mathbf{Y}_{ ext{OU}}$ saw the results of weed control with Agricultural Weed-No-More last year! Bigger yields! Lower dockage costs! Excellent results even under adverse weather conditions! Now, this year, you can get the same superior weed control at less cost.

New product gives 27% more coverage

The new Weed-No-More "80" gives an average coverage of approximately 27% more acreage on small grains than the 1949 Weed-No-More.

Weed-No-More "80" Goes Farther Per Gallon because it contains 80-ounces of 2,4-D acid. 60% more acid than last

Weed-No-More "80" costs less

to use than last year. In 1949 the cost of the product on an acid content basis was 22.6¢ per ounce. The new Weed-No-More "80" costs you only 12.2¢ per ounce of acid. The reduction in cost of acid amounts to 46%.

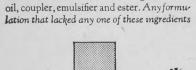
Kill Weeds in your Wheat

oats, barley, rye and flax with Weed-No-More "80". It penetrates quickly . . . rainfall minutes after application cannot wash it off. It acts fast . . . kills weeds more quickly than any other type of weed-killer. It's safe . . . used according to directions, it will not harm crops.

7,500 Test Plots used

To develop Weed-No-More "80", 33 separate formulations were tested on over 7,500 test plots. Over 100,000 individual plot readings were taken. Out of those tests came the outstanding weed-killing formulation—Weed-No-More "80".

The tests showed that the most effective weed-killer contained four ingredientsoil, coupler, emulsifier and ester. Any formu-





was found to be inferior. Each ingredient was tested, to be absolutely certain the most effective ingredients possible went into the formulation.

The Right Oil—in Weed-No-More"80" increases effectiveness without increasing danger of crop damage. It was the best of 200 oils tested.

The Right Coupler-in Weed-No-More "80" maintains formula in perfect condition irrespective of storage or date of

The Right Emulsifier-in Weed-No-More "80" ensures good emulsion stability. Gives fine uniform distribution and efficient coverage.

The Right Ester-The butyl ester of 2,4-D is the best solvent for the waxy coatings of weed leaves and is the least volatile of the common esters.

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grazing is in any way desirable. The object of range management must always be the obtaining of maximum forage consistent with perpetuation of the vegetation.

Greatest damage to vegetation will result from grazing too early in the spring when the trampling of wet soil disturbs the plant when it is still in its critical spring growing period. Also, excessive grazing removes too large an amount of the growing tissue and damages the plant. For maximum growth, plants require provision for early growth, allowance for the production of seed and opportunity for the establishment of seedling plants.

Forage And Moisture

COMMENT by the Dominion Range Experimental Station at Manyberries, Alberta, recently, illustrates below-normal moisture available for crops during the 1948 and 1949

At Manyberries in 1948, annual precipitation was 9.93 inches and seasonal precipitation was 6.12 inches. This amount produced 190 pounds of forage per acre. In 1949, only 90 pounds of forage was produced per acre from 11.19 inches of annual precipitation and 4.45 inches of seasonal precipitation. The long-time forage yield at Manyberries is 279 pounds per acre, and the 21-year-average annual precipitation is 11.09 inches, while the seasonal precipitation averages 5.84 inches.

It happened that in the fall of 1948 drought period occurred which left little reserve moisture for the growing season of 1949. The Manyberries station says: "Whenever soil moisture is depleted, the depletion may be felt for several years after the precipitation becomes normal. Recovery of plants after drought may not be so complete as it appears. Many of the plants are reduced in vigor and size, or are even killed, hence the amount of feed produced.

If average yields of forage are to be secured in 1950, above-normal precipitation will be necessary this year in areas where the reserve moisture in the soil last fall was negligible.

Toad flax

TOADFLAX is a very bad weed which is spreading rapidly in western Canada and is not readily controlled. The Dominion Experimental Station at Beaverlodge in the Peace River district reports that toadflax occurs quite generally in that area and is especially well established in certain portions.

The resistance of this weed to control by all ordinary methods is derived from the fact that its roots are especially persistent. It is spread both by its creeping root system and by seeds.

At the Beaverlodge Station the eradication of toadflax has been under study for the last two years and it is reported that one treatment of as high as four pounds acid equivalent of the ester formulation of 2,4-D has not resulted in satisfactory control. If the toadflax was treated first when it was in the early bud stage and in late August a second treatment applied to the resprouts, it was noted that no sprouting occurred after the second treatment and the treated plants were shrivelled and entered the winter in a very unthrifty condition. Even with this set-back, however, the new growth the following spring indicated that the treatment had had very little effect on the stand of toadflax. Patches of this weed, however, can be controlled by applying sodium chlorate in sufficiently heavy doses to make growth impossible. This, the Beaverlodge Station points out, will be too expensive for larger areas.

Sow Forage Crop Mixtures

FORAGE crops are something like people, in that they do better when they work together. This is the opinion of J. E. Birdsall, Supervisor of Crop Improvement, Alberta Department of Agriculture. When grasses and legumes are combined, as in the case of alfalfa and brome grass, the total yield is more than if either were seeded separately.

The grasses provide fibre, and increase the humus and water-holding capacity of the soil nearer the surface, while the legumes, by reason of their ability to extract nitrogen from the air and increase fertility, open up the soil to a greater depth, because of their deep, penetrating root systems.

Mr. Birdsall adds that a pasture mixture is less likely to cause bloat than if a pure legume only is used, and in addition the mixture is more nutritious than a pasture of straight grass. Fuller stands are more likely to be secured, which tends to account for the higher yield, and the mixture will probably give more continuous grazing.

Animals seem to find a mixture of legumes and grasses more palatable than either one alone. The mixture is easier to cure and for that reason is not likely to require quite so much labor, or to develop quite so much spoilage.

Mixtures suitable for particular areas can be determined by consulting your nearest agricultural representative, or by writing to the provincial university or your nearest Dominion experimental station.

Sprinkler Irrigation

THE development and increasing use of the sprinkler method of irrigation raises the question of the comparative advantages of sprinkling and surface irrigation. Both cost and the beneficial effects of the two systems are involved.

The sprinkler method possesses advantages in the control of erosion, the possibility of more uniform application and better control of the amount of water supplied, particularly in areas where the surface soil is shallow, or the water table is high. However, in most instances, except for use on high-priced crops, such as sugar beets, vegetables, seed crops and perhaps pastures where the topography of the soil is not favorable to surface irrigation, the Dominion Experimental Station at Lethbridge believes the use of sprinkler irrigation will be limited because of the higher

Sprinkling has certain disadvantages, the most important of which probably are the high initial cost for equipment, the high operating cost under prairie conditions as well as under wind interference, the danger of clogging nozzles by dirt and the fact that where crops are high, operators get wet. Moreover, a sprinkler system cannot be accommodated very well to a fluctuating water supply. It

does largely eliminate the necessity for land leveling, and shows up to advantage where the soil is sandy, or where there is rough topography or steep slopes. It can also be used to advantage with the higher-priced crops, as a supplement to surface irrigation, where it is necessary to germinate shallow-seeded crops, and to moisten the top soil just before harvesting root crops.

According to the Lethbridge Station, the initial cost for a sprinkler system varies from \$3 to \$10 and ranges for the most part around \$4 per acre-inch of water supplied. With 12 inches of water applied per acre during the season, the initial cost for equipment would amount to about \$48 per acre. The cost of applying water by the sprinkler method will vary from \$1 to \$3 per acre, depending on the kind of power and the amount of water applied.

By comparison, the cost of applying water by surface irrigation varies from 15c to 40c per acre-inch, depending principally on the uniformity of slope and the size of the irrigating head which can be efficiently used by one man. Thus the cost per acre would vary perhaps, from \$3 to \$6, the higher figure being experienced on very steep slopes where small irrigating heads only can be used.

No significant increases in yield were noticeable from sprinkler irrigation over surface irrigation, especially if the land was well prepared for the spreading of water.

June Rain Most Needed

AN interesting 12-year study recently completed at the Dominion Experimental Station, Beaverlodge, Alberta, indicates the crucial importance of June rainfall for satisfactory grain yields in the Peace River District.

These studies, reported by A. C. Carter, find that at Beaverlodge the yield of wheat is not directly associated with the total amount of precipitation in the 12 months preceding harvesting of the crop, and is even less directly connected with the precipitation from September to March. It is apparently not significantly related to amount of rainfall during the growing season (April to August) but is more closely related to the amount of precipitation from April to mid-June than from late June to harvest.

Breaking the growing season down into months "a very definite association between June rainfall and wheat yield is indicated . . . rain falling in late July and during August has actually seemed to depress yields.'

Rain, and precipitation generally, also influences the quality of the crop. June rainfall is crucial here also, and was instrumental in the reduction of the protein content of the wheat kernel." Precipitation in any other period of the year had little influence. June rains encouraged vegetative growth, increased nitrogen and therefore reduced the movement to the flowers and seed pods. Nevertheless, the June rainfall is so important from the point of yield that it may produce a larger amount of protein per acre.

Grasses And Soil Preservation

TNDER government controls, a vast acreage in North Dakotareportedly a million and a half acres -must be taken out of cereals," says the North Dakota Experimental Station. Grasses restore tilth to the soil, and tilth, explains T. E. Stoa, agronomist at the North Dakota Station, is that desirable crumb structure which makes for better drainage, provides for aeration and makes the soil more workable, yet less subject to wind or water erosion."

Soil conservation, which is so much a part of U.S. farm policy, has firm supporters in two North Dakota farm brothers who operate a section of land, which in 1949 was one of three winners in the district, in the North Dakota Soil Conservation Achievement Program.

"We get more crops than before and can also handle more livestock," say these brothers. "We have 30 head of cattle and are planning to go more into the livestock business, raising purebred Angus. Before we started on this conservation plan, the land was becoming badly gullied and soil losses were becoming severe; in fact, there was one place where the land was so cut up it could not be farmed. Now we can go anywhere on the place with farm machinery."

By farming all the cultivated land, except for a small amount seeded to crested wheat grass which was found unsuitable for crops, Monke brothers have been able to introduce a crop rotation which alternates either corn or fallow with strips of crested wheat grass. The buffer strips, along with the grain stubble, supply early spring and late fall pasture for the livestock. In summer, the livestock pastures on native pasture, so that the grazing season has been lengthened and the winter season shortened.



Some authorities are suggesting that prospective markets will probably warrant some increase in flax acreage this year.

Take a tip from a contented cow!

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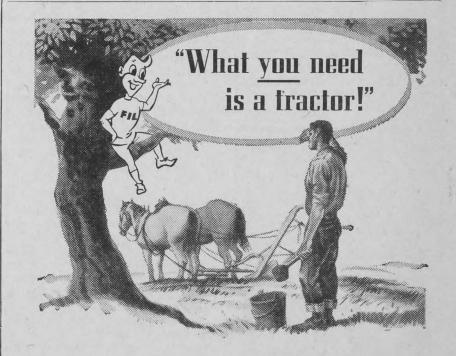
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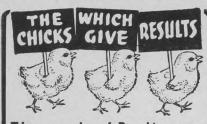
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1	Pullets	96%	Acc. 100%	Live Ar	r. Gtd.	

Poults available twice weekly, also in brooders for prompt shipment. We hatch from some of the finest Pure Bred flocks in Canada,

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Only about 50% of the chicks have been hatched in Canada up until now. This will mean a shortage of eggs and poultry meat this summer and fall. The result, high prices. Don't miss out. Order your chicks now, 12 pure breeds, 13 cross breeds, to choose from. Most of our pure breeds R.O.P. Sired. Day old, started, older pullets, turkey poults.

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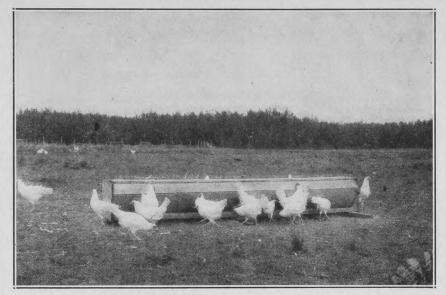
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17.25	9.10	White Leghorns	35.00	18.00
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POULTRY



A few good Leghorn birds on summer range.

Spring Management Of Poultry

Superior chicks and careful husbandry increase profit from the farm flock

THE bird that performs well in the laying house or in the fattening pen will usually be found to have had good care during the brooding period. Later performance is partly determined by the care during the first six or eight weeks in a chick's life. Clean, comfortable environment and proper nutrition during this period goes a long way toward ensuring profitable performance.

The first essential is to make sure that the chicks ordered are from flocks bred for disease resistance, high production and economical gains.

The second important point is to provide a clean, warm brooder house for the chicks. The house and equipment should be thoroughly cleaned and disinfected at least two weeks before the chicks are expected to arrive. An adequate job of cleaning will include scraping and brushing the walls, ceiling and floor of the brooder house, scrubbing the floors and equipment with hot water and lye and whitewashing the house when it is dry.

The condition of the brooders is of primary importance. In order to ensure that they are in good running order they should be in operation for at least three days before the chicks arrive. This allows time to adjust the temperature and to make necessary repairs, as well as helping to dry the house.

For the first week after the chicks arrive a temperature of 95 degrees, two inches from the floor at the edge of the hover, will be correct. The temperature can be reduced by about five degrees each week until such time as artificial heat is no longer required. A thermometer is a guide to the right temperature. The chicks are also a guide as they spread out evenly or lie in a circle at the edge of the canopy where the temperature is right.

Plenty of room should be allowed to reduce the danger of overcrowding. A room 10 feet by 12 feet should accommodate 250 chicks.

Chicks should receive a good quality chick starter within 36 hours of hatching, and it should be continued for at least six weeks. Crowding will be avoided if at least one inch of feeding space is provided per chick, and a two to three-gallon waterer provided for each 100 chicks. At the end of 10 days it is well to double both figures. Chick-size limestone grit should be provided.

It is a good plan to place littersand, peat moss or cut straw-on the floor, prior to the arrival of the chicks. If the chicks tend to eat it, cover the litter with paper until they have learned to feed properly.

Young stock will get diseases from coming into contact with adult birds. Keep them away from pens and yards that have been used by adult birds the previous year. If new birds are always brought to the farm as day old chicks, the danger of introduction of disease will be reduced.

A clean yard or sunporch should be provided and the birds got out of doors whenever the weather permits. Chicks that are raised in confinement can be given additional floor space through the addition of sunporches until they are six to 10 weeks of age and are ready for ranging.

The range should be clean and well drained. A good range is most desirable and can be provided by using either a two or a three-year rotation of ranges. An acre of good range will carry 300 pullets. When the birds are on range it is important to provide plenty of room in the range shelters, so the pullets will roost in the space provided. When the birds are on range the shelters, feed hoppers and drinking fountains should be moved often enough to prevent bare spots from appearing on the sod. Range birds require plenty of fresh mash, grain and clean water.

If a producer starts with good chicks and maintains a high standard of poultry husbandry it is possible to put pullets into the laying house in the fall, that will provide a profitable return to the owner.

Egg Price Prospects

THE production of eggs in Canada was reduced 15 per cent in 1949, as compared with 1948 production. Last year we produced 330,374,000 dozen eggs, compared with 388,-579,000 dozen the previous year. All



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treatment.

Used as a dip, Black Leaf 40 controls lice on cattle, sheep and goats. Used as a drench, combined with copper sulphate, Black Leaf 40 controls stomach and intestinal worms in sheep and goats. Used as a repellant, it keeps dogs away from shrub-bery.

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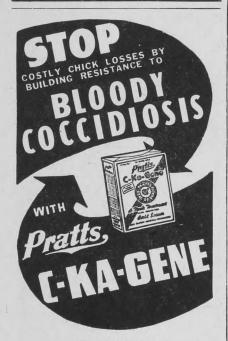
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WARNING!

Are you going to be one of the unfortunate people who are "Poult price conscious" this season? Often times, cheap priced poults mean cheap quality through poor livability and type.

Remember! You will determine your 1950 profits by the total weight and quality of the birds you market through the poults you buy now. We can supply non-sexed, sexed hens, sexed toms, all from Government Approved Pullorum tested breeders. Broad Breasted Bronze, White Holland, Beltsville White. Free catalogue.

Tweddle Chick Hatcheries Limited FERGUS, ONTARIO



Read What the U.S. Dept. of Agriculture says

In a recent U.S. Department of Agriculture bulletin dated Oct. 1949, the control of Coccidiosis of chickens is discussed, and the relative merits and faults of different treatments are compared and contracted America other find. and contrasted. Among other findings of interest it points out that immunization of a flock of birds using preventive preparations is the most advisable approach to the problem, and, that certain drugs, because of their toxic properties, should not be used until the first symptoms of the disease appear. It emphasizes that once the symptoms appear in a bird there is no known effective cure for that bird.

C-KA-GENE, a sulphur-base compound, to which has been added several ingredients for the purpose of increasing its effectiveness, is Safe, Economical and Easy to use.

The strongest recommendation for Pratts C-KA-GENE is that it has stood the test of time. For over 11 years, C-KA-GENE has been put to this acid test, and remains in popular use throughout this continent. This can only be because C-KA-GENE is easier to use and its over-all results are more effective, safer, and more economical.

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of the western provinces registered a reduction. In British Columbia production fell from 33,830,000 to 28,782,000 dozen. In Alberta it dropped from 39,324,000 to 35,409,000 dozen; in Saskatchewan from a 1948 figure of 37,825,000 down to a 1949 figure of 33,328,000 dozen, and in Manitoba from 28,552,000 to 26,184,000 dozen. There seems to be every reason to believe that the decline will continue and accelerate

Is a further reduction wise, or is it justified? Evidence appears to support the contention that any large-scale reduction in poultry numbers is not justified. Early reports indicate a fairly drastic reduction in chick sales and hatchings. Doubtless this is partly a continuation of the reduction of last year, noted above, but more particularly a result of the marketing panic following the loss of the British market in December.

Actually, in 1949 only about 10 per cent of our production of eggs went abroad. The other 90 per cent was consumed on the home market. The loss of this 10 per cent introduced extreme instability into the Canadian market. A 10 per cent reduction in production should offset this market loss. Reports from Saskatchewan indicate that in that province hatchings in the spring season last year totalled 6,000,000, and a reasonable reduction would lower this by 600,000. Actually during March 1949 a million chicks were hatched, compared with estimated and anticipated hatchings of 500,000 in the same month this year -a reduction of 50 per cent.

A report in a recent Canadian Poultry Review indicates that this condition is not restricted to Saskatchewan. By early March, hatchings in Ontario were down to 80 per cent of 1949 hatchings for the same period, and the reduction in poultry would be enough to take care of the anticipated reduction in demand even if hatchings returned to the 1949 level for the rest of the season. Similar conditions appear to prevail across the country.

Although it is extremely difficult to predict markets with confidence, it appears that poultry production in Canada is falling off more than the contraction in markets should justify. The possibility of a scarcity and consequent high prices this fall and winter is not too remote.

Brooder House Blues

OSSES in the brooder house often L cause people to give up poultry raising. Nothing is more discouraging than picking up a dozen dead chicks each morning. Brooder house blues is no joke; a dead chick is a dead loss, so check every angle, and find out why they die.

Feed companies have helped to take the guesswork out of feeding, but remember, chicks will not eat the dry mash unless they can drink lots of water. Most chick fountains are too large for the first week and let the little fellows get wet. A wet chick is often a dead chick.

Tomato cans with two nail holes punched about an inch from the top, these filled with warm water and inverted quickly into a deep saucer, are the best founts for a few days, but need filling often. Provide one for each twenty chicks. After a week the



Beautifully illustrated folder, practical Service Bulletins, an illustration of the Anatomy of the en, three separate illustrations of the Digestive, Respiratory and Reproductive systems all in natural color on heavy High Gloss paper. All this nformation neatly fied in serviceable loose-leaf pinder for future reference absolutely FREE with very order of 100 or more chicks; worth at least \$25.00 from an educational point of view. R.O.P.-SIRED CHICKS

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HOW TO REAR PULLETS ON THE RANGE

As soon as winter weather disappears, pullets can again be raised on the open range. Below are tested range-rearing management steps which, if followed, will result in a profitable flock:

Chicks can be put on the range when they are about seven to eight weeks of age. When they near six weeks of age, separate the pullets from the cockerels and gradually change their feed from Miracle Chick Starter to Miracle Growing Mash.

Give them scratch grain—early in the day, and before they roost. Keep water fountains filled with fresh, clean water and either sprinkle medium size grit on top of their mash, or put it in separate hoppers.

It is very necessary to provide "Range Shelters", a common size being 10 feet by 12 feet for 100 birds. Keep these shelters at least 250 feet apart and move them at least once every four

It is most important to see that there is plenty of shade for the pullets during the hottest parts of the day. Where there is no natural shade such as bushes and trees, a crop of sunflowers, planted in rows, will provide excellent shade.

Range Shelters should be equipped with nests so that pullets will be used to these and not lay eggs on the floor when they are put in the laying house.

MARACLE"

Range-rearing also calls for good pasture conditions. Even when the soil has been properly prepared and the right grasses well-established, a definite program of mowing and renewal is necessary to achieve best results and to guard against disease and parasite infestation.

Pullets should be left on the range until 15% to 20% are laying. They should be graded before being housed, and the earliest maturing ones put into a separate pen. Some feed hoppers and water containers should be set on the floor at first, as range bred birds are not used to flying up to raised hoppers and fountains.

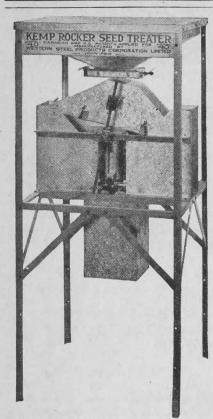
When pullets reach 20 % production, it is time to put them on Miracle Laying Mashmaking the changeover a gradual one. Miracle Laying Mash will give layers everything they need to make eggs and still keep up their own strength.



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ORDER TWEDDLE CHICKS! It's almost that simple! Year after year new customers and old, who buy Tweddle chicks, tell us that they actually receive more eggs and higher profits with these famous Money Makers. The secret, 26 years of careful breeding for better chicks. Many breeds are headed with R.O.P. pedigreed males. Day old, older pullets, turkey poults. Free catalogue.

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regular chick founts are all right, but be sure to have lots of them. Feed the mash on newspapers for two days until they get used to picking it up; then chick-feed troughs will be best. Three laths nailed together, with ends eight inches long, make good feeders. These won't upset.

Too much heat kills more chicks than cold. Let fresh air in near the ceiling and have some windows cotton covered. Draughts across the chicks' backs every time the door is opened are definitely bad. You also step on the odd chick. Make a "well" inside the door three boards high, with room to stand in. You can keep fuel or feed in this well too.

Round all corners with stiff cardboard so the chicks will not pile up in the corners. Use four inches of fine sand on the floor. Once warmed, it stays warm for hours, even if the stove gets cold. It is easily cleaned by scraping a bit of the top off. More can be added if needed, but make sure it is dry

Never wash the drink dishes in the brooder house, nor spill any water when filling them. Better to remove them from the house first. If you give the chicks milk to drink, have it either sweet or sour every time and use earthenware dishes-never tin.-Jenny

Old Ideas Sound

R. S. HAMER, until recently Director of Production Service, Dominion Department of Agriculture, has unearthed the records of speeches made at a poultry institute meeting in Lanark County, Ontario, in 1907. The comments of the speakers indicate that the basic principles of poultry production have not changed over the last 40 years.

Here are some of the claims of the speakers:

"That just as surely as there were breeds that excelled others in productiveness, so there were strains that excelled the average of the breed.

"The production of eggs was just as much a nervous function as was the production of milk, hence the importance of handling fowl quietly and without undue disturbance.

"It was of first importance to have hens of laying instinct-feeding and management came second.

"With every improvement in blood, a corresponding improvement in the care and feeding must be made, or progress would be uncertain.

"Any increase in the ability for greater production, or in the ability to fatten, became a source of weak ness, rather than an advantage, if fowl are not supplied with sufficient food to give a full and active development to these functions.'

High Hatchability

OOD management practices can Gincrease the hatchability of eggs very significantly. A number of techniques help to guarantee that every egg produces a chick. Work conducted by W. F. Harrow, Head Poultryman at the Dominion Experimental Station, Harrow, Ontario, indicates that results from large pens containing several males are generally better than where only one male is mated to a small group of females. This mass mating reduces the chances of preferential or discriminate mating, and reduces the danger of certain matings being rendered void due to lethal factors peculiar to the birds concerned.

Infertility, dead germs and dead-inshells are frequently related to poor hatches. Vigor in males is sometimes overabundant and fertility of eggs may be adversely affected if fighting or interference takes place. Fighting can be reduced by putting metal beak guards on the males, and placing movable partitions two or three feet high in the pens will reduce interference.

Comb damage can affect the fertility of eggs. Males with frost-bitten combs lose some of their vitality, so they should not be exposed to extremely cold temperatures. It is also possible for combs to be damaged when feed-hopper reels are set too

Nutrition is also important in getting high hatchability. The presence of certain vitamins in the diet of the parent stock is important for normal development of the embryo, as well as its ability to hatch properly. Fortified feeds should be given to the breeding stock two or three weeks before the hatching season. The feed must be fresh, as certain vitamins deteriorate rapidly.

In most cases the incubation of the eggs is carried out at central points by experienced operators. The proportion that hatch is determined largely by care in the hen house.

Raising Quality Broilers

THE objective in raising broilers must always be to get a good quality bird to market weight with the least possible cost. Only in this way can maximum profit be realized.

Perhaps the most common error is to allow too little space for growth, particularly in the case of chicks that are hatched early in the spring. W. F. Mountain, head poultryman, Dominion Expermental Station, Harrow, Ontario, reports that Barred Rock chicks weighing an average of one and a half ounces have increased their initial weight over 30 times in a period of 10 weeks. If increases in size can be considered to follow something of the same relationship, then the number of chicks started should be based on an allowance of two square feet of floor space for each bird. Laterhatched chicks that have an outside run can do with rather less floor space. However, sanitation is difficult to maintain if overcrowding is permitted.

It is possible to get specially designed broiler mashes, though many farms have home-produced feeds that aid in reducing costs. Skim milk is always a very good feed, and green feed, either in a yard, or chopped up and fed in troughs, makes a supplement that is rich in minerals and vitamins. The freshness of the feed is also important, both because broilers show more appetite for fresh feeds, and because certain valuable feed properties tend to diminish with storage.

It is difficult to say that any one breed of birds makes the best broilers. Whatever the breed used, the really important thing is to provide an environment that leads to the production of healthy and attractive birds.

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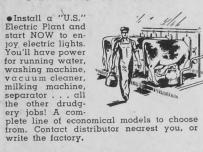
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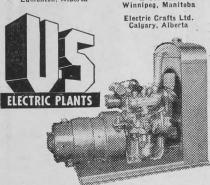
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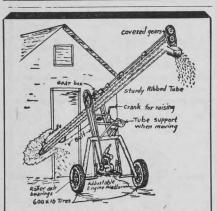
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PISTON HEAD BOLTED TO WORK BENCH

bench. Put a snug-fitting shaft through the wrist pin. Fasten a V-pulley to one end of it and the polishing or grinding head to the other.-W.H.M.

Hose Connections

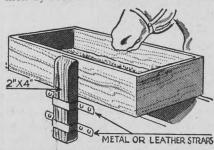
When the radiator hose on my car sprung a leak I found that it was badly rotted and that the only replacement I had was too large. The problem was solved by cutting two



1½-inch rings from the best part of the old hose and using them like bushings. I slipped them on the ends of the water pipe, then placed the oversized hose over them and made the joints tight with adjustable clamps.

Removable Feed Box

A removable feed box is especially useful for horses. Build a small square box and secure a short post of twoinch by four-inch lumber to it. Fasten



two metal or leather straps to the outside of the manger to act as loops for the post. The removable box can be kept clean with little trouble.-D.S.

Rust-proofing Pails

If containers are subject to rusting, it is a simple matter to remedy the situation. Remove all old rust and clean the surface, leaving it dry. Heat some asphalt (available from old "B" batteries) until it melts. Add enough gasoline to bring it to the consistency of thick paint. Apply this mixture to the cleaned surfaces with a brush. Two or more coats can be applied but two are usually adequate. Pour enough gasoline into the pail to heat it thoroughly in burning. A tablespoonful is enough for a 10-quart pail. In burning, it will harden the asphalt into a shiny, impregnable coating. Do not overheat as this will cause the material to chip off. Large water tanks and barrels can be treated in the same way.-F.E.B.

Extends Muffler Life

When gasoline is burned in a car, water is formed and passed out through the exhaust as vapor. In cold weather it condenses in the muffler and causes rusting. To remedy the situation simply drill a small drain hole in the lowest part of the muffler shell. The life of the muffler will be greatly extended.-S.B.P.

Protecting Anchor Posts

Posts which are always being driven into the ground and then removed again have to have some protection against splitting. This is best done by



driving on a ring or band of iron around the top of the post as shown. Anchor posts for hay stackers, tents, etc., should be strengthened in this way.-J.C.E.

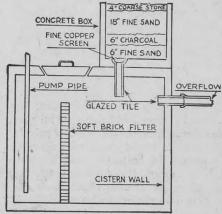
Splitting Logs

Wedges have the habit of jumping out of green logs particularly if the logs are frozen. A pinch of salt put on the log where the wedge is to be driven will stop a lot of jumping. Splitting becomes easier, quicker and less trying.-O.P.L.

Cistern Water Filter

Care should be taken that the washings from the roof and gutters are sent out the waste pipe when it starts to rain. Once they have been washed clean, the water should be directed to the cistern through a sand filter. The filter consists of a box about 36 inches square and of equal height. It is placed over the cistern which it drains into. Fine copper screen is required at the outlet from the filter to prevent sand from passing through. Over the screen are layers of sand, charcoal, sand and gravel or stone.

Where all traces of color and taste are to be removed from the water, a soft brick filter should be built in the



. CISTERN

cistern just like a dividing wall. The soft bricks should be laid on their sides and cemented together with a rich mortar to a height just below the level of the overflow pipe. Occasionally the bricks will have to be cleaned with water and a stiff brush. -F.H.L.



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HORTICULTURE



Spring greens! Everyone likes salads in the springtime. A garden can keep them coming all summer long.

The Progress Of Horticulture

The steady increase of horticultural knowledge over a broad field was highlighted at the 1950 Western Canadian Society of Horticultural meeting

F some of the early pioneers in prairie horticulture could attend some of the horticultural meetings held in 1950 they would be more than surprised. From one point of view they might perhaps be disappointed, because few people today have the time to experiment as painstakingly as the original pioneer horticulture enthusiasts, who lived in a less-hurried day. On the whole, however, they would be gratified and feel that their faith and interest had been vindicated, if they could learn of the developments that have taken place since those days.

Nowhere was this more evident than at the recent annual meeting of the Western Canadian Society of Horticulture held in Winnipeg. This Society is significant, in itself, of the more recent approach to horticultural problems. It is composed primarily of professional horticultural workers, namely, those at the universities and experimental stations in the prairie provinces and northern British Columbia. It is at these and similar institutions today that by far the greater part of the newer knowledge of horticulture is being discovered, where research work is under way, where scores of new varieties of horticultural plants are being tested, together with thousands of seedlings which have resulted from crosses or from open pollination. It is at these institutions where the search for newer and better varieties of fruit, ornamentals and vegetables goes on most intensively.

Fortunately this acceleration of effort by state institutions in no way handicaps individuals, whether private growers or nurserymen, who may, as a matter of keen personal interest, desire to experiment either with the development of new varieties, or the testing of existing varieties. What it does mean is that horticultural progress in western Canada is accelerated to the extent by which money and intelligent effort are made available from government sources.

It was abundantly clear at the meeting of the Western Canadian Society of Horticulture that a substantial body of useful programs in horticulture is under way at prairie insti-

tutions. Between them the universities, experimental stations and the forest nursery stations have interested themselves in projects ranging from farm shelterbelts and adaptable trees of various kinds, down through the smaller and showier ornamentals, through the fruits of all kinds that have promise of adaptability to prairie conditions, to the flowers and vegetables. A point of importance in connection with this development is the comparatively rapid development of canning crops, particularly in Alberta and in Manitoba. Successful varieties for this purpose require special characteristics, and these are being bred into new, or improved, old varieties, in order to secure complete adaptability to our somewhat rigorous climate.

Considerable progress has been made in co-ordinating the recommended varieties of fruits and vegetables in the several provinces, so that the varietal zones in two adjoining provinces shall coincide at the boundary. As this co-ordination is perfected, it will mean less confusion for growers and others interested.

Another important development which is slowly getting under way is the co-operative fruit breeding program, recommended by the Society and approved by the Dominion Experimental Farm Service and the provincial institutions. This program calls for the development of new varieties of fruits suitable to the prairie provinces, by means of a careful program of varietal crosses, made principally at the Dominion Experimental Station at Morden, where seedlings will be grown until they are of a size suitable for transplanting. They will then be shipped in large numbers to certain designated institutions, especially the universities of Alberta and Saskatchewan, where they will be grown on land specially put aside for this project, and their characteristics carefully recorded. Selections will be made from such seedlings and the most promising individuals will be propagated for wider testing.

Other institutions are working co-operatively with the Dominion

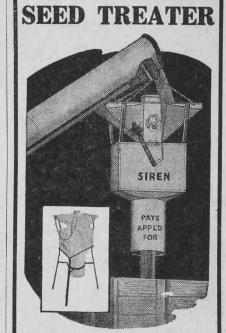
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Government in the testing of vegetable varieties under a national program of vegetable trials. These co-operative projects, and the many individual research projects at the several stations, are bringing together a substantial body of horticultural knowledge which has not hitherto been available. As the field of horticultural knowledge widens, the field of opportunity broadens also. The special interests of the home gardener, the grower of canning crops and the horticulturist who operates under irrigated conditions, are becoming of considerable importance. There will always remain the problem of securing the utmost hardiness, combined with utility, for varieties to be grown in the more northerly portions of the prairie provinces and British Columbia.

It is no wonder then that the meeting of the Western Canadian Society of Horticulture was considered to be perhaps the most satisfactory in its relatively short existence. Though organized only in 1943, with its active Though membership confined primarily to those who are engaged in horticultural research, experimentation and extension on behalf of the public generally, other interested horticulturists are always welcomed and find attendance profitable. Next year the Society will hold its meeting at Regina.

Gardens Can Be Assets

SUALLY there is no continuing asset in a vegetable garden. It is the opportunity to have a generous garden which gives the farmer an edge over his city cousins in this respect. In addition, he does have equipment with which to do the work of caring for a garden less laboriously.

A garden on the farm can be a valuable asset. Even so, it must be developed every year. From the point of view of good health, there is nothing more nourishing than the fresh garden products which are available from fairly early in the summer until fall, in addition to those stored products which can be carried over through the winter months. Nowadays, when cold storage locker plants are so frequently to be found in towns, villages and hamlets, the quick-freeze method of processing the vegetables grown at home can be used to great advantage and, of course, can increase the potential value of the farm garden.

B. J. Gorby, of the Dominion Experimental Farm, Brandon, suggests that a good garden will yield a greater return per acre than any other farm crop. He points to the fact that records from the illustration stations in Manitoba show an average annual value of farm vegetables, including any surplus that may be sold, amounting to from \$100 to \$150 per farm, which, on a half-section, mixed farm, may amount to between two and three

per cent of total net farm income. If the same quantity of vegetables obtainable from a farm garden had to be purchased at retail prices in town, the cost in Mr. Gorby's opinion "would readily exceed six to nine per cent of the net farm income."

No one would deny that the quality of fresh, home-grown vegetables is superior to that purchased in the stores, even under the most careful handling. Convenience is another important factor, especially to the housewife who needs no argument to convince her of the advantage of being able to keep her vegetables in the very best kind of preservationgrowing in the soil-until perhaps an hour before meal time.

If health, convenience and general satisfaction are important, to say nothing of economy, then the farm garden is surely a valuable asset.

School Ground Improvement

THE two pictures on this page, of the Carroll Central School No. 868 at Carroll, Man., were forwarded to The Country Guide by John Taylor, caretaker of the school. One of the pictures was taken by Mr. Taylor in 1925 and the other, also taken by him, shows the school grounds as they were in 1948.

In addition to taking the pictures, Mr. Taylor informs us that he also planted all the trees and other horti-



Carroll School, 1925.

cultural plants used for improving the appearance of the school grounds. Beginning in 1925 the school trustees, to quote Mr. Taylor, "went on a tour of inspection to other school districts to see what could be done to beautify our school grounds, and this has been the result.

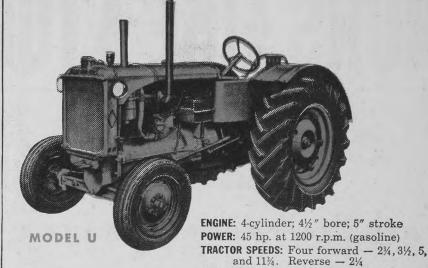
Not all the planting was done in the one year. Instead, a little bit was done each year, and inside the school grounds there are peonies, tulips and shrubs. No wonder Mr. Taylor says that it gave him a great deal of pleasure to do the planting and see the school grounds improve in appearance as the years went by.



This is the Carroll Central School, Carroll, Man., as it looked in 1948.

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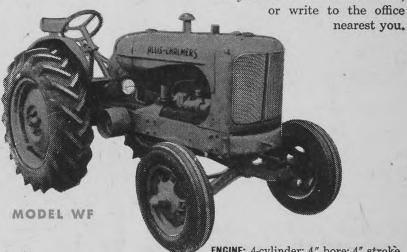
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□2-plow "VAC" tractor	□Field balers
□Larger 2-plow "SC"	□Forage harves
□3-plow "DC" tractor	☐Manure sprea

NAME

ADDRESS

Bacon Hog?

Continued from page 16

up the small breeders' herds, have come from a relatively few breeders of national reputation. These few have done an excellent job in producing quality stock, although they could now use performance more in their breeding programs, along with the show ring results. The show ring has undoubtedly contributed to improvement, but little is known of the relationship between show ring type and utility performance. Some information is now coming to light on the heritability of bacon characteristics, and it would seem that the two should be combined.

Comparisons with other countries do not prove much, but the practices followed in Denmark are interesting. Pig testing was started in that country early in the century and a breeder there is not considered to be a breeder until he has shown the capacity, over a period of years, to produce quality hogs as measured by testing. The shows there have been, for a long time, competitions between hogs with performance records. There is little doubt, now, that if performance had been a part of Canadian show ring standards only a few years ago, there would not have been the swing to short-nosed pigs. Recent studies have indicated that such pigs are inclined to be shorter and rich in back fat. Performance records would have shown this to be the case and the fad would not have gone far.

The native breeds of pigs in Denmark is the Landrace, although some years ago English Large Whites were also used in their program. They have now, however, improved the native breed to the point where there is little crossbreeding, and almost all their bacon comes from the Landrace. Canadian breeders are moving in the same direction, except that they are improving the Yorkshire; and comparisons on the British market would show that this breed is eminently suited to the production of highquality bacon.

Quality bacon is, of course, a relative term. To be more specific, a larger proportion of hogs is needed, which, at 200 pounds live weight, yields carcasses at least 30 inches in length, with shoulder fat not over 1% inches and loin fat not over 14 inches, with full hams and a high per cent of lean meat. Along with such carcass specifications we need hogs which will convert grain into bacon economically. One of the most outstanding results the Danes have obtained is in the reduction of the feed-gain ratio in their tested hogs. In the thirties they reduced the average amount of feed per 100 pounds gain from 360 to 325 pounds. They did it largely through selection, selecting the best, or lowest feed-consuming strains, to mate with other low-consuming strains.

Such a program of selection must eventually go right down to the small farmer with only a few sows, but it should start at the top-with the breeder supplying foundation stock to other breeders.

THE Advanced Registry policy for purebred swine was started in Canada in 1929. Four pigs from a litter are tested and scored, and the results give a picture of the litter. It is a picture indicative of the inherent capacity of the mating and, to some

extent, indicative of how litter mates of the tested mating may perform in breeding.

There have been cases where A.R. animals have failed to live up to expectations. Many of these cases can be explained by the fact that only one or maybe two generations of testing have been followed; and in many instances only some of the ancestors have been tested. Selection based on tests on both sides of the pedigree should be followed, generation after generation, in order to fix the desired characteristics.

The simple act of testing a litter is not enough. In order to improve, selection must be from the "best" testing litters, and uniformity in a test group is important. Some litter carcass scores of 75, for instance, are made up of scores of 53, 69, 84 and 94 while others with the same average score have pigs which scored 70, 72, 78 and 80. Obviously the latter is a better prospect from which to pick breeding stock. From the former the chances are about even to get either a poor animal or a good one.

The litter mates of a tested mating should be bred to litter mates of another tested mating. The details of the scores can be studied and the mating made so that one complements the other. The offspring of this mating should be tested and they in turn complemented by another tested mating, and so on-generation after generation. This entails saving the breeding stock from each tested litter until the tests are completed, and then making selections on the basis of the performance of the four test pigs. Weaning weights (an indication of the nursing ability of the sow), age at maturity, carcass quality and feed economy should all be considered.

Let us consider for a moment what might be expected if only ten major breeders followed the plan suggested above, that is, based their selections on performance, generation after generation. Say they sold only 100 boars to other breeders in a year, boars whose litter mates had an average carcass score of 80 and required 350 pounds or less of feed per 100 pounds gain. (The 80 score suggests that at least 75 per cent would grade A.) These figures are only arbitrary. They could be better, but they are still far above Canadian averages.

If the breeders who purchased these 100 boars were also testing, and each sold only 10 boars to commercial breeders, or farmers—1,000 boars from tested stock released annually—it is reasonable to expect that at least 100,000 pigs would result each year,

which would definitely improve the general Canadian average.

Then, if the offspring of these original boars were, in turn, mated to boars with testing behind them, the program of improvement would be of a constructive and permanent nature.

A LTHOUGH the emphasis is put on performance and the continuous use of records, it is not suggested for a moment that type be thrown out the window. A boar or gilt must be of an acceptable type. Continued selection based on performance should result in the production of a good type, but rigid culling of off-type animals must be followed.

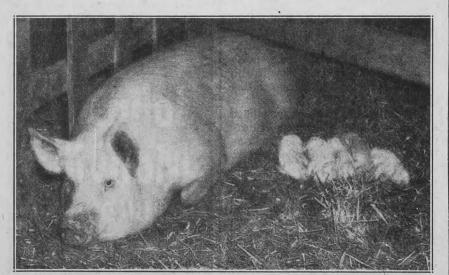
In females a minimum of twelve good, well-spaced, functional teats should be demanded. Prolificacy, or good litter size, is one of the outstanding characteristics of Canadian Yorkshires. It must be protected. Temperament, or mothering ability, is also important. Some strains are good and others undesirable. The undesirable ones should be eliminated.

Length of productive life is also a factor in economical swine production. Type is somewhat indicative of this characteristic, so that selection within good performing strains should consider all factors and aim at the combination, which, over the long haul, will do the best job. This may not be possible in one or two generations, but quite often several good characteristics are present in a strain, so that it is only necessary to improve it in one or two respects. The basis of selection, however, should be performance; and the improvement from generation to generation must be measured by performance. Pigs that produce high-quality bacon, economically, are the right type.

The production of high-quality Canadian bacon is dependent on good breeding, good feeding and sound management. Best to best is good enough—it will promote improvement—if by best is meant the selection of breeding stock, generation after generation, based on type and performance. By performance we mean ability of litter mates to produce high quality economically; and by type we mean those physical characteristics indicative of temperament, reproductive ability, and durability.

Uniform, high quality bacon pigs and breeding stock will not lack a market.

(Note: J. G. Stothart is senior animal husbandman at the Dominion Experimental Station, Lacombe, Alta., in charge of an extensive program of swine improvement.)



Small litters reduce hog profits and call for improved selection and breeding.





Dentistry - - Past And Present

You have nothing to fear from an appointment with the dentist nowadays but it was not always so

by HARVEY DAY

ENTAL troubles are as old as the human race, and we who live in an age of anesthetics must consider ourselves lucky that we are not treated by the primitive methods in vogue centuries ago. According to archeologists, prehistoric man sometimes suffered with dental caries, though bad teeth were comparatively rare when people lived on natural foods such as fruit and raw meat, which they tore with their teeth and were forced to masticate before swallowing. Many of our dental troubles are due, not to sweets as is generally imagined, but to the pulpy, denatured foods that civilized people consume.

Egyptian dentists knew a great deal about drilling and filling teeth under crude anesthetics. Hemlock mixed with honey was one, and if too much hemlock was administered, the patient died. Another and much less satisfactory method was to crack the patient on the skull with a wooden mallet wrapped in felt, so that he was knocked unconscious. One can well imagine the patient ringing the dentist's bell and then, his courage evaporating, scuttling down the street for dear life.

There is no question that these ancients were skilled, for dentists in the States were astonished recently when excellent false teeth and castings made by the Incas of South and Central America, and also by the Etruscans (about 1,000 B.C.), were exhibited in New York.

Dentistry was rather tardy in developing in Britain. When teeth were drawn the patient was first made drunk, after which the offending teeth were wrenched from his mouth by crude forceps. History records that Queen Elizabeth often cried herself to sleep because her teeth ached, and once she groaned aloud to Bishop Aylmer, "Will no one help me? Must I endure this torture to the end of my days?"

The good-hearted Bishop replied, "There is but one cure for toothache, Your Majesty. Allow the doctor to pull the offending tooth; but if you are afraid, allow him first to extract one of my teeth." What a man!

Dentistry in the past was a rough and ready affair. The barbers, who let blood and pulled teeth, were required to hold a licence and belong to a guild, otherwise they could be fined sh.8/6 (a third of a guinea) on the spot.

A good tooth-drawer was a privileged man and commanded excellent fees. . . . In the reign of Henry IV one Matthew Flint was paid sixpence a day out of the national Exchequer on condition that he would, without additional payment, draw the teeth of any citizen in pain. This seems to be the forerunner of the National Health Scheme.

THE law was hard on those who abused their privileged position as tooth-drawers, and a case is reported of Richard Fryer, a renowned tooth-drawer, who was fined \$40-a tremendous sum in those days—"for carelessly and improvidently making an assault with his forceps on Joan, wife of Richard Tuell, and when

drawing the tooth, broke with it the jaw, tore the tongue and wickedly drew blood from her!" All who have suffered at the hands of dentists will sympathize with Joan.

In every fair and market place during the Middle Ages the dental booths were prominent, the skilled "drawer" being recognized by his belt and necklace of teeth, and the toothpick stuck jerkily in his hat. They were powerful, ruthless, dextrous men who flung the patient to the ground, thrust his head between their legs, and yanked the offending tooth with pliers and as little pain as possible.

At one period tooth-pulling was an after dinner diversion among the very rich. James IV of Scotland enjoyed few pastimes better than watching teeth being pulled and the victims yelping with terror. If, when that monarch visited a fair, no teeth were being drawn, peasants were rounded up and dragged forward protestingly, and for their inconvenience were paid a few pence in order that the King might not forego his normal pleasure. Alternately, jails were combed for the more vicious inmates.

A MAN was chief engineer to a former Amir of Afghanistan when that dictatorial potentate was afflicted by violent toothache. At great cost he sent to India for a British dentist who assured him that he would suffer no pain if his decayed teeth were extracted.

The Amir was dubious. "First extract the tooth of a soldier," he ordered.

When this was done, and the soldier had confirmed the painlessness of the operation, the Amir commented, "Soldiers are brave and are used to suffer uncomplainingly. Pull the tooth of a peasant."

A peasant was subjected to the operation, which he said was painless. "Poor living has made him tough," said the Amir. "Send for a dancing girl."

The unhappy wench had a grinder hauled painlessly from her mouth, at which the Amir grunted, "Women feel pain less than men." Eventually, after many subjects had gaps in their mouths, he was satisfied, and submitted to the operation. The complete absence of pain so delighted him that he gave the dentist a double fee as well as a ruby the size of a pigeon's egg.

Recently the British Minister of Health received a small package containing a set of false teeth. With it was a note which read, "These never fitted, but now, under the New Health Act, I have been fitted with teeth that chew."

In the last year nearly six million Britons have been fitted with dentures that have converted chewing from an ordeal into a pleasure, though there are still many who refuse to believe that false teeth can be anything but a penance and a trial. One man I know formerly had dentures that fitted so badly that he always took them out before meals!

Modern dentistry has made such tremendous strides that today no one need fear the dentist's chair, for even

Building Ideas

Fa

PRACTICAL HINTS
ON MATERIALS AND METHODS

• There are always dozens of building jobs to do on a farm. They vary in size from complete new buildings to minor repairs and remodelling. One thing you should be sure to do before you undertake any major job is to get as many facts as possible on up-to-date methods and materials. Building materials manufacturers like Johns-Manville can supply you with informative booklets and folders that will be of great help in your planning. You should also visit the Johns-Manville dealer in your district and see actual materials.

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In addition to a wide range of Building Materials for the farm, Johns-Manville can provide you with complete plans for many different types of farm buildings. These plans have been developed by the Better Farm Building Association. Plans available include, 20-Cow Dairy Barn (1 storey); Garage and Work Shop; All Purpose Barn; Machine Storage Shed and Repair Shop; Milk House; Multiple Poultry House; 3-Bedroom Farm House. Each set of 17" x 22" working drawings is available from Johns-Manville for \$1.00. They are complete in every detail including electrical, plumbing and ventilation specifications. To order any one of the farm building plans listed above send money order or cheque for \$1.00 to Canadian Johns-Manville, Dept. 159, 199 Bay Street, Toronto. Be sure to state clearly which plan you wish.



drilling—the most fearsome part of any dental operation—can be rendered painless; and though the dentures you buy may not have a bite of 170 pounds pressure, which is the bite of the average set of natural teeth, they are strong enough to enable you to chew any foods, no matter how tough.

But dentistry does not stop at extracting teeth, filling them, and designing dentures. Modern dentistry is preventive. The dentist is happiest when he can stop your teeth from decaying. There are communities, like those which live on the island of Tristan da Cunha and in some islands in the Hebrides, who are virtually free from dental caries; as are many tribes in Africa, India and elsewhere. These peoples have been the subject of intensive investigation, and scientists

now know most of the causes of decay.

Some years ago a panel of eminent medical men, including Sir Harry Baldwin, honorary dental surgeon to the King, issued a manifesto which stated that good teeth go with correct feeding, and that decay is caused mainly by an acid produced by the fermentation of starch and sugary particles which remain in the mouth and are derived chiefly from white bread, confectionery, sugar and sweets. In order to combat this, people should eat raw fruit, raw vegetables and nuts -all of which require mastication. Potatoes were particularly recommended, and all food in which Vitamin D is present: egg yolk, fish, fats. Also foods containing calcium: cheese, spinach, radish, cabbage, melons, lettuce, walnuts and bran. (APS.)



Plowing between the rows on an Annapolis Valley farm.

Pack Rats Again

Does a pack rat tap with its tail or its hind foot?

In the February issue of The Guide there is an article on the pack rat, a part of which states that he slaps his tail.

Now while I never saw a pack rat slap his tail, I never saw one that I was sure did not slap his tail. Just because one never saw any particular act performed he could not testify that it had not been done.

However, I can say from first hand knowledge that a pack rat definitely does stamp his hind foot. Here is the story.

While I was batching in a cabin in Montana I had a cast iron wood burning heater stored overhead. A pack rat got into the stove storing all kinds of things. This accumulation finally got to be very noisy as he played about. I worked out a plan to get him, then went at it.

I put a small board over the stovepipe hole with a weight on it, also a weight on the front draft iron or slide, opened the door till it came against this weight leaving just enough opening, as I thought, for the rat to get through. I then tied a stout string to the lift piece on the door and ran it through the loose floor boards and to my bed.

Then I was ready. He came as usual and scratched on top of the stove and as the opening was blocked he finally found the door and got inside. A good pull on the string and I had him! The rustling stopped for a time and I heard him moving about cautiously.

I couldn't sleep so I went to carry out the second part of my plan. I left the lamp on the table and enough light came up through the cracks in the floor. I had all I needed handy. All I had to do was to get a heavy grain sack, slide the board off the stovepipe hole and put the sack securely over this opening. I poked a wire under the draft iron and into the stove. Just a little shaking of the wire and Mr. Rat was at the other end and into the sack.

I now got a two-quart glass jar, put the top into the mouth of the sack and tied it securely. Then when I pulled the sack out from the jar the rat, seeing the light, rushed out and into the jar. He couldn't turn around or at least I didn't let him. I had him secure. Then by shaking the jar slightly I could observe his actions.

He stamped with his hind foot, but gave no action with his tail. The hind foot seemed to set as if by a trigger then released and snapped down suddenly. By this I am convinced that a pack rat does not use his tail to cause that tapping or striking so often heard when he is excited or scared, but makes the noise with his hind foot.—A. C. Jones, Courtenay, B.C.

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FARM YOUNG PEOPLE



Headquarters of the Peel County Junior Farmers Association at Brampton, Ontario, built by the club members with the help of local individuals and organizations and a grant from the Ontario Department of Agriculture.

Why Leave The Farm

THE Rural Sociology Department of the College of Agriculture, University of Wisconsin, recently interviewed young people to determine what factors were important in leading the younger set to stay on the farm, or, on the other hand, to take up urban life. No complete answer proved to be possible, but their work throws some light on the problem.

The study was made in three counties. In one, urban contacts and industrial employment were available near home; in another industrial jobs were available less than 50 miles away, and in the third county there were no large cities, and industrial jobs were remote.

In the two more rural counties farming was the occupation most generally chosen. In the industrial county a larger percentage of the farm boys planned to enter a profession, to own a business, or to do clerical or skilled work in the city.

Nearly half of the farm boys chose some occupation other than farming, though very few nonfarm boys chose farming for a career. This tended to confirm, if confirmation was needed, the fact of the steady movement of farm young people toward the urban centers.

Another study was recently made in the United States with the objective of determining the present occupations of former 4-H club members who had been active at some time during the years between 1914 and 1936. The study was made in 13 states.

It revealed that 44 per cent of the boys are farming, 10 per cent are engaged in teaching, 11 per cent are in the Extension Service, and the remainder are in other fields of employment. Of the girls, 36 per cent are married, 26 per cent are teaching, 11 per cent are in the Extension Service and the remainder are in other fields of work.

Both of these studies serve to illustrate that about half of the young people raised on farms in the United States do not choose farming as a career. It is likely that money, social opportunity, ability, interest and chance all play a part in moving them away from the farm. The same factors move more or less the same proportion of young people away from farms in

Canada, and set a challenge to those interested in social and educational possibilities in the farm areas.

Winter Food Scarce

THIS year, as in so many years, continued cold weather, deep snow and food shortages have made it hard for birds to get enough to eat. As late as the middle of March, Game Commissioner E. L. Paynter reported that in Saskatchewan many birds were close to starvation. In the southwest of the province it was reported that food shortages had taken a heavy toll of game birds, particularly pheasants and Hungarian partridge.

In many areas elevator agents have put out screenings for birds that ventured near to town. The greatest help can come from farmers who put out a few bags of low value screenings. Even if the feed is put right in the yard in a sheltered spot, often scores of birds will come to feed. When seed is being cleaned for spring planting is a good time for young people who are interested in birds to get half a dozen bags of screenings and save for feeding the birds next winter.

Safety Clubs

FARM accidents are becoming so frequent that some of the clubs across the line are initiating programs calculated to reduce accidents. Tractor safety programs are becoming fairly general. The purpose of these programs is to teach young people the techniques that will serve to reduce tractor accidents to a minimum.

A number of programs of a more general application are also being practised. Most of the accidents on farms are relatively small and individually they are not too serious. Collectively they lead to a great deal of lost time, and the programs are designed to train and teach young people to avoid these accidents.

One of the most unusual programs is in New York State. Here a program is being followed that is designed to reduce bicycle accidents. Farm young people are using bicycles so generally in this state that accidents are reaching serious proportions. The program is designed to teach the traffic laws and to establish safety consciousness. This training continues to be useful for members when they become responsible for handling a truck or car.



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Blemishes! "They were a real problem until a friend recommended Noxzema," says glamorous Carmen Lister of Montreal. "I used it as my powder base—in no time my skin looked clearer."

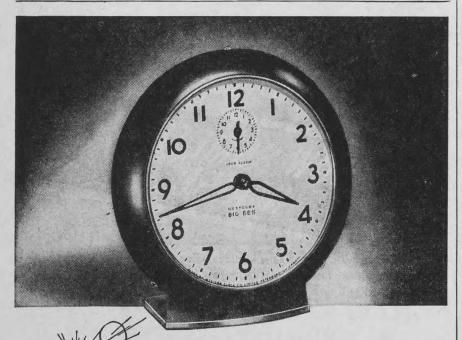
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● If you're bothered with dry rough skin, blemishes, or similar complexion troubles—here's important news! A noted skin specialist has developed a new Home Beauty Routine using a greaseless, medicated formula—renowned Noxzema Skin Cream. It helped 4 out of 5 women to softer, smoother, lovelier-looking complexions in clinical tests. Here's all you do.

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Additional Wheat Board Payments

It has been made quite clear that there will be a further payment by the Canadian Wheat Board on wheat marketed during the current five-year pool, in addition to payment based on \$1.75 per bushel already made. The rate, it has been made clear, will be comparatively small, probably not much less nor much more than five cents per bushel. The amount, however, may be considerable, as that rate will apply to wheat deliveries during five years.

In addition, it is clear, from market prices which have prevailed during the year, that there should be some considerable payment on participation certificates issued during the current year on oats and barley. It will be some considerable time after July 31 before the actual amount for distribution can be determined.

In the meantime, there has been some pressure on the government to instruct the Wheat Board to make an interim payment, because of the need of many farmers for further money at

the present time.

Although such requests have been addressed to the Government of Canada, it must be remembered that any money involved would not come out of the National Treasury, but out of funds belonging to producers, which, in any event, will be distributed, at no very distant date, to farmers. An interim payment, in the near future, would simply mean that much less for final distribution, not only of the amount actually distributed, but also of the cost of the operation, which would be considerable. That cost would include, not only the work of printing and writing cheques, but also the interest cost of borrowing money against sales yet to be made.

Quite probably, there are producers who would prefer not to have an interim payment, but to wait for the somewhat larger amount that might be paid in a final settlement. Indeed, some producers, for income tax reasons, might think it better if the final payment should be deferred until 1951. That, however, is not likely as probably accounts will be settled up before the close of the present calendar year.

If the decision should be against making an interim payment, probably the question of costs will be the most important consideration.

Wheat Board Urges Grain Deliveries

The Canadian Wheat Board is urging upon western farmers to deliver, as rapidly as possible, all wheat, oats and barley that remain for delivery. Their efforts in this respect deserve the support of western producers. Early delivery is in the interests of producers, in order to give the Wheat Board reasonable opportunity to sell grain before July 31, which date marks the end of the five-year pool in wheat, and of the one-year pool for oats and barley.

At the moment, there are reasonably strong markets for all of these grains, and advantage should be taken of such demand, while it exists. If grain is not sold during the next few months, when it can readily be disposed of, a marketing opportunity

will be definitely lost. Either buyers will be forced to look to other sources of supply, or a demand will go unsatisfied. If such grain is unduly delayed in delivery, it may have to be carried over so as to interfere with the marketing of the coming crop.

Early delivery is also important from the standpoint of early settlement of accounts for these grains, and prompt payment to producers on their participation certificates. Final payment can not be made, or even calculated, until sale has been completed of all grain delivered on or before July 31. Moreover, payment on participation certificates may be larger. Prompt sales can be made. That, will naturally depend upon the course of prices during the next few months.

There is still another matter to consider. At certain elevator points in the West, there are places where elevator congestion could easily occur, if deliveries are unduly held back, and then a considerable rush of grain occurs during the latter part of July. While there may be some farmers who will want to carry forward grain, and market it after the close of the present crop year, probably the majority will want to dispose of all marketable grain before the end of the crop year.

Once work on the land begins, grain hauling will inevitably be suspended to a considerable extent. It is to be hoped, therefore, that, during the next few weeks, there will be as great a response as possible to the request of the Wheat Board in this respect.

Postponed British Wheat Sales

A good deal of concern was felt by western wheat producers when, during the month of December last, it was announced that wheat sales to Great Britain during the current crop year would be reduced by some 12½ million bushels, so that available funds might be transferred to the purchase, by Great Britain, of other Canadian commodities.

This subject was followed up by the Canadian Federation of Agriculture, which, in its recent presentation to the Cabinet at Ottawa, made the following statement:

"We regret the action of the Dominion Government in causing the Canadian Wheat Board to postpone the delivery of wheat under the British Wheat Agreement in order to enable Britain to finance the purchase of other products. Other means should have been found to help Britain maintain her purchases. The action taken may weaken the prestige of the Wheat Board, through no fault of its own. We ask the government to give adequate assurance forthwith that the interests of the wheat producers under the wheat contract shall be fully protected.

The Minister of Agriculture, the Honorable James G. Gardiner, on March 9, made a statement in the House of Commons to indicate that this step would cause no loss to participants in the current five-year period. At the end of the crop year he said that the government will put into the Pool up to 25 million dollars to reimburse farmers for the British sales thus foregone. The government will expect to recover that amount by sub-

COMMENTARY

sequent sales of 12½ million bushels of wheat.

In essence, that means that the government will take over the British obligation in respect to this quantity of wheat, and will sell it later to Great Britain at \$2 per bushel, instead of at whatever lower price may prevail for wheat sold to Great Britain during the next crop year.

Thus, it is expected that no loss will result from this postponement of sales to Great Britain, either to producers delivering during the current five-year pool, or the government. Whether or not any adverse effects are later experienced by western producers will depend upon the Canadian carryover at the end of the current crop year, or rather, at the end of the season, before the new crop begins to move. If any surplus wheat is to be carried over, because of postponement of sales to Britain, that may create a selling problem in the future. However, it may happen that the Wheat Board finds a market for all current supplies of Canadian wheat, without impairing the prospect for sales of the new crop. That will only be determined as the season advances.

Eastern Objections To Wheat **Board Policy**

Some opinion still seems to prevail in eastern Canada that marketing of oats and barley by the Canadian Wheat Board ought to be conducted in the interests of producers. The most recent indication in that respect is a telegram addressed by the President of the United Co-operatives of Ontario to the Minister of Agriculture at Ottawa, complaining of a recent advance in feed grain prices, and suggesting that the records of Wheat Board sales in recent weeks should be made available to the public.

It will be remembered when, on August 1, last, responsibility in this connection was assumed by the Canadian Wheat Board, there were many predictions that this step would lead to political pressure on the Canadian Wheat Board from eastern interests for lower prices on feed grains. Last November, complaints of high prices for such grains led to a meeting of different farm organizations in Toronto. A resolution which was the outcome of that meeting, however, did not transmit such complaints, and made a rather indirect reference to the question of prices. It called the attention of various ministers of agriculture to an apparent shortage of feed grains, and recommended "some action to make adequate supplies of feed grains available to the livestock industry, at prices within the reach of livestock feeders.'

Subsequently, a number of resolutions were passed in eastern Canada objecting to use of the open market by the Canadian Wheat Board in selling oats and barley. Complaints, however, tended to lessen, as during the winter there was a somewhat substantial decline in prices of oats and

Recently there has been a considerable advance in such prices, due probably to a combination of causes. These included a change in market conditions in the United States, the development of overseas export

demand for Canadian feed grains, and limited marketings in the West, on account of weather conditions. There was also some revival of the demands in the United States for malting barley at a time when deliveries were very

Insect Damage Feared In U.S.

Recent news from the United States suggests that the severe winters associated with the climate of western Canada may have advantages not always realized. The winter has been very mild over a considerable part of the United States, not severe enough to accomplish the usual winter killing of destructive insects. On that account, there are fears of greater insect damage in 1950 than has occurred for many years. In the winter wheat belt there are complaints of widespread infestation of wheat fields by green

It is in the corn crop, however, where entomologists are fearful of damage. Last year, they say, corn borers accomplished a record destruction of some 300 million bushels, and they fear that greater damage may result this year.

A somewhat similar situation prevails in the cotton belt with respect to the boll weavil.

As western Canadian farmers know from experience in connection with grasshoppers, damage from insects is not something that can be predicted with any accuracy.

Japan Still Excluded From IWA

Germany has now been admitted to the International Wheat Agreement, while the question of admitting Japan has been deferred at least until July

The question of allowing those two countries to participate in the Wheat Agreement has been under discussion for a long time. Canada has been in favor of their unrestricted admission, and the sharing by exporting countries of additional exports, in proportion to the allotment of exports to other countries. The United States at first objected to allowing Germany to join the Agreement, unless the United States should continue to supply all wheat for that country, as she has been doing for some time past, because of political and financial arrangements now in effect. The difficulty appears to have been solved by an agreement between Canada and the U.S. for some equitable sharing of exports to Germany.

When it came to the question of Japan, it was the United Kingdom which objected. The reason was fear in the United Kingdom that, if Japan got access to Australian wheat at the IWA price, there might be diverted to that country wheat which Great Britain would like to buy, in preference to making purchases in North America. That is because Australian wheat can be paid for in sterling, while dollars have to be found for Canadian and U.S. wheat.

Germany will now be entitled to buy, at the maximum IWA price, while Japan must continue to pay the open market price in the United States, or the Class II export price for Canadian wheat. Some Japanese purchases from Canada have recently been reported.



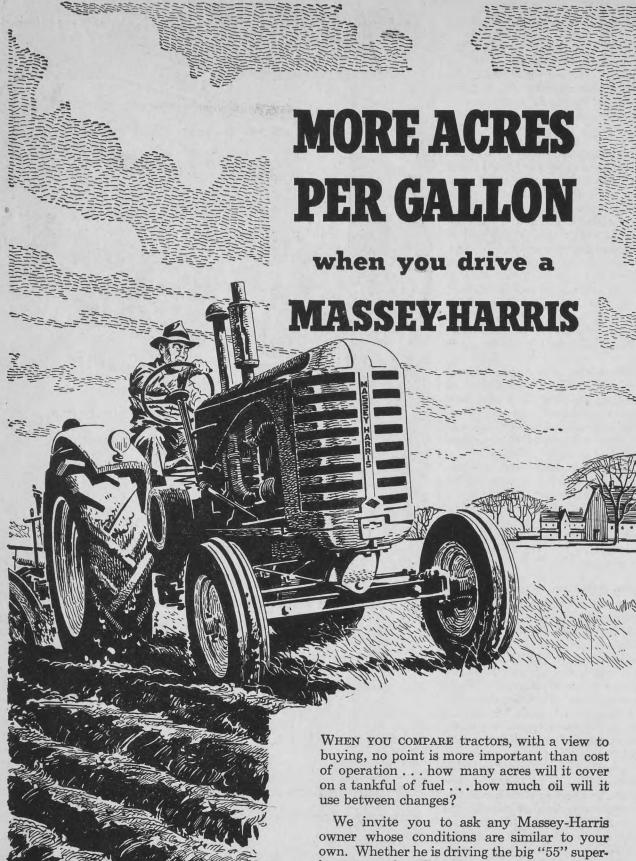
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Late Triumph

Continued from page 15

potential excellence and develop it. Mr. Grenville's flock has never been large—never numbered over 140, and at the present time it is down to 75. He has never been impressed by numbers. Englishmen rarely are. Even a smaller flock than his now is provides plenty of opportunity for fine, constructive breeding. It is his proud claim that the general excellence of his small flock is so high that sheep men who are unfamiliar with his stock cannot pick out the imports from the home-breds.

WHEN the Toronto Royal opened its doors after the war, Grenville was ready. His first draught opened the eyes of eastern sheep men. It is his practice to have his lambs dropped in January, but they are so advanced in growth by show time that easterners cannot be convinced that they are not November lambs.

Across the Red Deer River, P. J. Rock also embarked on a Suffolk career and the two brothers-in-law have progressed together in friendly rivalry. Their greatest successes have been at the Salt Lake sale, the most important on this continent. It is an invitation sale, not open to every aspiring breeder, but to those whose flocks are of known excellence. So far, "P. J." as he is known, holds the palm having sold one ram for \$3,300, the highest price ever paid anywhere for a Suffolk, but Art Grenville has scored a few bull's eyes himself, as the pictures with this article will show.

These successes at Toronto and Salt Lake City are common knowledge. Every show frequenter knows about them. What most of them don't know, and what is quite important, is the fine piece of land conservation that Arthur Grenville has carried out with the sheep-grass combination. Everyone cannot duplicate his spectacular successes which have made him independent of the Canadian market for purebreds, but he believes everyone can repeat his achievement in soil restoration.

There is no trick in growing grass, he asserts, so long as you seed shallow. Better to broadcast it and harrow it in, even if as much as 20 per cent of it remains on the surface and is wasted, than to put it in too deep. A stand of grass will keep a surprising sheep population. He has carried as many as 120 ewes on a 50-acre field with no other feed. And this on a soil and in a dry belt which would not be considered good grass country. This particular field was a stand of brome, alfalfa and crested wheat sown at the rate of 4-2-4 pounds per acre.

There is something in the Alberta soil and climate, however, conducive to rearing growthy sheep. He believes that the high plains where he lives can grow stronger bone and bigger frames than anywhere else on the North American continent. American sheep men come here to make purchases for they are beginning to find it out too.

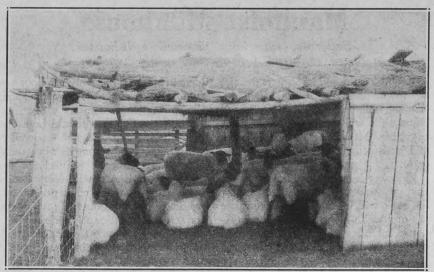
Fencing? Yes, there must be some fencing, although Art Grenville has never lost a beast to the coyotes, in spite of the fact that they have paid business calls on his neighbors' poultry

proof trouble-free grease caps. Easy

to handle, too . . . high clearance power lift and crank operated

depth controls . . . set it to do a thorough cultivating job in any

kind of soil.



Shade is important, and is provided cheaply at Grenville's.

flocks. But the sheep will pay for the fence, he declares, and pastures can be used for a long time while you are acquiring it. His original field of crested wheat had been down for 18 years when I saw it.

Art Grenville insists that the sheep business is nice work. He prefers it infinitely to raising pork. He knows whereof he speaks, for during the war, under the stimulus of patriotic urging he kept 16 brood sows rearing two litters a year. And he is one of those people who can make their January litters pay better than the midsummer pigs.

About ten years ago Mr. Grenville lost his wife and gradually he has allowed the active conduct of his tarming operations to pass into the hands of his son Douglas, who is the farmer, and his son-in-law, Harold Trentham, who is the stock man. But less bustle at home has meant more away from home.

Perhaps his greatest opportunity for

service came with the organization of the Drumheller Agricultural Society in 1947. Mr. Grenville was its first president, and had much to do with shaping its policy which, be it recorded, is no pale copy of other similar organizations in the province. Recalling how the twig was bent in his own home county of Suffolk, he has carried out, with general consent, a strong drive on junior activities. After two years as president he insisted on stepping aside to allow younger men to take over.

When I checked this part of Mr. Grenville's work over with Fred Bell, the agrep who serves as secretary of the Society, this is what I got. "Anything Mr. Grenville tells you regarding his share in the work of the Agricultural Society can be accepted as right. He is generous to a fault and I have never known him to claim for himself credit that belongs to others.

It's what the home folks say that counts.



Growthy spring lambs with their dams.

Giant Toads Help Agriculture Toads in Puerto Rico have eliminated a serious pest

IN 1898, as a result of the Spanish-American War, the United States took over Puerto Rico. One of the results of this change was that sugar

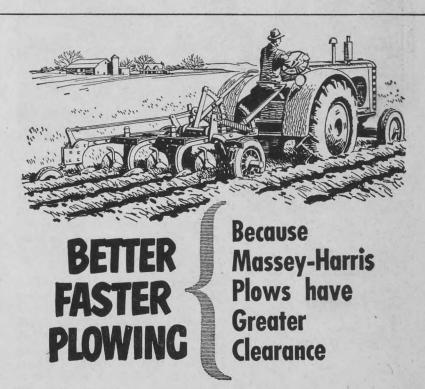
cane growing increased in the island, and a result of the growth of sugar canes was a very rapid increase in white grubs-the larval stage of May beetles-who preyed on the sugar cane.

The situation became so bad that cane harvesting often resolved itself into a race to gather the sugar cane stalks before the grubs had completely destroyed the roots. The practice developed on many plantations of having the beetles and larvae collected by hand and presented for payment

A variety of other methods of control were attempted, including dynamiting the fields, introducing parasites, maintaining a herd of pigs to follow the plow and eat grubs, and chemical control. None of these methods were very successful.

The giant toad, native to the tropical mainland of the Western Hemisphere, had already proven effective in checking the ravages of May beetles in some of the islands of the West Indies, and in 1920 the U.S. Federal Experiment Station, Puerto Rico, introduced the toads to the island. Within a few years the toad became established and now occurs in abundance in any place where it can find fresh water pools for reproduction. Since the introduction of giant toads the May beetle has ceased to be a major problem in Puerto Rico.







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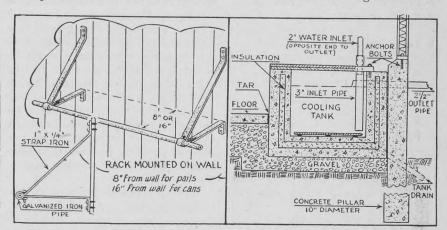
FOR all fluid milk shippers to the town and city trade, a good, efficient milkhouse is essential; for all other milk and cream shippers, it is advisable. Milkhouses, to be efficient and satisfactory, need not be elab-

Planning is necessary, however, for any milkhouse, especially as to how the milk will be handled. A complete job of handling the milk in the milkhouse includes filtering, cooling and storing the milk, and the washing, sterilizing and scouring of utensils.

Site is important. Good drainage, both on the surface and underground, is imperative. For convenience the have at least 7½ feet between floor and ceiling, with a ventilated attic above the ceiling joists.

Since a milkhouse should be a cool place in summer and not too cool in winter, good insulation is very desirable. Shavings can be used for this purpose, but they should be protected by a vapor barrier of paper on the inside of the studding. Provide also for screened windows large enough to represent an area at least equal to 10 per cent of the floor area. Ventilation is a "must," if only for the reason that the milk and cream develop an off-flavor so readily.

Of course the cooling facilities are



Details of foundation, wall and cooling tank construction for milkhouse.

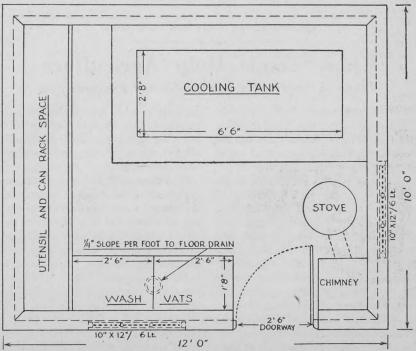
milkhouse should be located near the stable, but doors should not open directly to or into the stable. Running water is a very great convenience; otherwise it is very important to the saving of labor that the source of water be close at hand.

It is very tempting to build too small a milkhouse. A building 10'x12' is a reasonable, minimum size. It is advisable to have concrete foundations that are substantial. Eight 10inch-diameter pillars, going down six feet into the ground, are recommended, with a gravel fill of at least six inches laid under the concrete floor, to prevent heaving. Don't forget the slope on the milkhouse floor. This, of course, should run towards the drain, and should drop about a quarter inch per foot.

A frame construction is quite adequate, but care should be taken to the most important part of the milkhouse. These should be large enough to accommodate one full day's production at the peak season. Two square feet of tank space per pan is required. It is advisable to separate the cooling unit from the walls and the floor of the milkhouse in order that damage will be prevented if settling occurs. The tank, too, should be well insulated and covered with an insulated lid. If the top of the tank is lowered until it is not more than 18 inches above the floor, added convenience will be provided in handling the cans.

Allow sufficient rack space to take care of all pans and pails in an inverted position, and without piling.

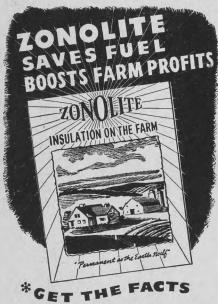
Perhaps as important as anything else is that a milkhouse should be used only as a milkhouse, and not for other purposes.



Floor plan for 10 by 12-foot Manitoba milkhouse.



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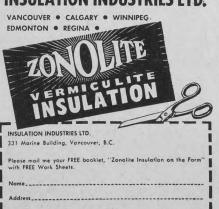
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A Two-Storey House

Continued from page 10

of either of the two latter there could be a rearrangement of clothes closet space in the master bedroom, and a doorway added opening directly off the hall.

The full-size basement gives accommodation to furnace and fuel as well as a storage room and a double cistern. This type of cistern is suggested as being the most popular type for cleaning. The home builder may work out his own plan for division of storage space into areas for vegetables and canned foods. Being near the stairway it is convenient when foods are being stored or taken out for use.

Ordering House Plans

Working Drawings for a Two-Storey House may be obtained in blueprint form by ordering The Country Guide Plan No. 5 Included with the blueprint sheets are suggestions to aid in the selection of materials, general specifica-tions and a bill of the materials for a nominal charge of \$2.50 postpaid in Canada. Send orders to The Country Guide Plan Service, 290 Vaughan St., Winnipeg, Manitoba.

This house is designed, as others shown in The Country Guide, along lines of simple construction devoid of excess ornamentation and complicated structural details. Full consideration has been given to site and relation to other farm buildings, and the highway. The house shown runs north and south, thus placing the utility room and kitchen on the north end; the dining room and two bedrooms on the east; the living room and large bedroom on the south; the sunroom on the south and west corner.

The exterior finish suggested by the sketch is a combination of stucco and horizontal siding. There are other alternatives which would prove equally satisfactory and which the home builder might prefer. The house could be completely finished in stucco, siding, shingles or exterior plywood.

Annuals Here Again

OPIES of the Farming News and Scottish Farmer Annuals are here again for 1950. Many readers have been securing these famous livestock annuals through The Country Guide for years. The price is still \$1 each, postpaid, and orders will be filled in the order in which they are received.

The Country Guide also has a number of Stallion Record Books available, also at \$1 each, postpaid. These are indispensable equipment where a stallion is kept in service.

A few copies of the 1949 edition of these two books are still available and will be mailed, postpaid at \$1 each.

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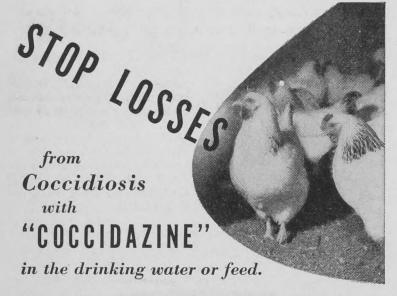


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Powder — No. 2406

Safety With Firearms

Careful and intelligent use of firearms robs them of their dangerous potential

by H. H. ANINGER

HOUSANDS of boys in Western Canada go out with rifles for hunting or for sport. Most of them are not too familiar with firearms. This short article should teach them at least the A.B.C. of safety and how to prevent those regrettable accidents about which we can read in the papers every day. We all know what a dangerous critter an inanimate rifle can be, but really, the dangerous thing is not always the gun. It is the lad who handles it, the know-it-all, the smart-aleck and especially the guy who thinks that gun accidents never happen.

First of all there is the case of the gun which was presumed not to be loaded. Well, it was and little Joe is dead. Remember this: whenever you hang up your gun—don't lean it in a corner—open its action and inspect the magazine. When you do so a cartridge pops out or it doesn't. If it doesn't maybe one slides into the firing chamber when the action is closed. Keep this fact in mind, especially if your magazine is of the tubular type under the barrel. Work your action a couple of times and in doing so don't forget to point the muzzle toward the moon.

Rifles with this kind of magazine sometimes hold the cartridge in the tube and from there it pops out, when you expect it least. In this tube-magazine gun you must look for shells at three places with the action open; first in the firing chamber and at the end of the magazine, opening into the action. If you cannot see one at the first two places and you see the plunger protruding from the tube, you may assume your gun is empty. But this doesn't mean you can point it at mother to scare her. No, never point a gun at anyone.

Less complicated is the clip or box magazine. In order to load or unload this gun, you must open the action and lay in or take out the cartridge from the top. This makes it fairly foolproof. I would recommend this kind of rifle for Junior's first gun. A single shot bolt action and no repeaters. He will take better aim, knowing there is only one cartridge in the gun. Besides it will save him a lot of ammunition.

Teach him to hang his rifle up with the bolt action always open, so if little Tommy gets hold of it he can do no harm.

A more tricky magazine is the clip magazine, which you see on many repeater guns. The removal of the clip does not unload the gun as many people persist in believing, for the very good reason that the cartridge may be in the firing chamber and has left the clip. After you have removed the clip take another good look in the firing chamber and you will probably see that the gun is still loaded! Remove the clip, open the action and get the slug out. Now at last your gun is unloaded. If more young and old lads would know this fact there would be less accidental deaths from clip-fed rifles.

Now this is the first and most important rule in handling firearms: you must assume that it may go off at any instant, loaded or not; you always

must keep in mind the possibility of an accidental discharge. Train yourself so that under no circumstances will you point the gun at anyone. If Junior doesn't stick to this fundamental rule in handling firearms give him a good spanking and take his gun away from him and you will save yourself and him a lot of grief.

YOW a little about the different safety devices. They should be trusted only to a limited extent. The cheaper single shot .22 is one of the worst offenders. The cocking piece is allowed to rest loosely on the cartridge in the chamber when not cocked, with the result that the only thing needed to fire it is a more or less sharp tap on its rear. Don't have too much faith in the safety notch on the hammer-nine times out of ten it can be jarred or pulled off. Try out the safety arrangement of your rifle by pulling the trigger, or banging the butt of the gun a couple of times on the floor, but don't wonder if it goes off through the roof.

If you find you cannot trust the safety the only answer is never to put a cartridge in the chamber, unless you are ready to fire it. The best safety arrangement will not work if you leave it in the "off" position.

The .22 is the most underrated and played with cartridge in the world. This innocent-looking little bullet never was any weakling. It travels over the ground at the rate of 1,000 feet per second, impelled by a breech pressure of 15,000 pounds per square inch. Next time you take shots at a tin can some other fellow throws in the air better think of the possibilities of this little shooting iron.

Sometimes Dad gets a .22 at an auction sale. Before you use this bargain rifle make a few investigations. Find out if you can see daylight through its barrel. It may have a cleaning rod rusted in it, and you may lose an eye or a thumb at the first discharge. Also take a close look at the firing pin. Some Jack-of-all-trades may have filed it to a needle-sharp point. This may cause a puncture of the primer with the result that the superheated gases will escape backward and cause injuries by blowing bits of metal in your eyes or face. If your gun misfires never sharpen the firing pin. Get a new one.

If Dad or Uncle intends to buy you a .22 for good behavior ask him to buy you a rifle made by a reliable company. Once in a while clean and oil the barrel, but do not insert the cleaning rod from the muzzle. The proper way to do it is from the firing chamber toward the muzzle. Also, if you don't kill your rabbit outright, don't finish it off with the butt of the rifle. Take a club with you and use it.

If you keep these few fundamental rules in your mind you can be fairly sure of having a lot of fun with your rifle in hunting or sport, without fear of injuring yourself, or your friends and family.

The importance of remembering that a gun is not a toy and is at all times dangerous if carelessly used, cannot be stressed too much or too often.



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Engagement Horse

Continued from page 12

"Where's that little bay you ride?" It was awkward. Amy Lou had a feeling that it wouldn't be right, somehow, to be off enjoying herself on Tailspin with someone who wasn't Dell. "I can't use him today," she explained. "You see he isn't rightly mine, and I'll have to return him to his owner."

That was going to be hard, giving Tailspin back to Dell. But how else could she do? Ordinarily, when a girl got unengaged, she gave back her ring. Amy Lou thought about when Dell had brought Tailspin to her, leading him from his tall, black mare. Tailspin had danced along, and when Amy Lou turned him loose in the pasture he explored around, interested in this new home. But in the night he found a low place and went over the fence, and next morning he was back at Dell's. He had been free; he could have gone back to the other side of the mountain to his old range, but he trudged across the dry river bed to Dell.

A MY LOU wondered if Dell would sell Tailspin now. She hoped not. What she wished was that Dell would turn him out and let him go back to where he'd been raised.

Sandy said, "Hey, I'm here. Rememper?"

Amy Lou laughed. "I was just thinking of something. Pop can use Tailspin and I'll take his horse."

They rode along the river trail where it was woodsy with sycamores and cotton woods, and the willows had a good green smell. Their horses plugged along, half asleep, and didn't care if Sandy leaned over and kissed Amy Lou.

Sandy said, "Amy Lou, you're so sweet. And I don't want you to think I'm being fast 'cause I want to kiss you. But I got to speed up this courtship. I can't take it slow like I should because a rodeo bum like me can't stay too long in one place. I got to follow the shows, pick up a little money. So I want us to be married soon, so you can come with me. I can't go off and leave you for someone else to steal."

That was the time Amy Lou should have explained to him about Dell, and how she loved Dell dearly, but not the way she should, because she didn't like feeling tied down to Dell. But Sandy didn't give her time.

"Ever been to Oregon, Amy Lou?" he asked. "Or seen New Mexico? I got lots of pretty places I want for you to see."

The next time he came they rode up a hill and sat and looked at the lovely world. "Amy Lou, you're so little and quick that you can pick up money riding someone's ponies in relay races. I'll teach you to trick ride, too. We'll make us a team. Oh, we'll have a life, travelling around, seeing everything there is!"

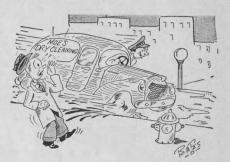
But the third time he came he was angry. It was late afternoon, and he had ridden fast, and his horse was wet. "You come here, Amy Lou, I got to have a talk. Now what's this I hear, you already being spoke for?" He looked stern as an angry father and Amy Lou was frightened. She wanted to run and hide. But he took hold of her, his hand tight and hard on her arm. "You been two-timing someone?"

She began to cry, but he told her that wouldn't help. "Got anything to say for yourself?"

She gulped. "I got plenty to say. Sandy, I love you, believe me, that's what is important. I'll tell you the truth, everything, and you'll help me, won't you? Please, Sandy?"

"I'm listening," Sandy said.

She told him how it was about Dell. She told him about always knowing and adoring Dell and about how she had been running barefoot in the summer grass when a rattlesnake struck her. "Dell held me down like a calf to be doctored, and he cut with his knife and drew out the poison. He said, 'Now I've saved your life and



you're mine, and I'll marry you when you grow up.' Seemed like I didn't have much choice, Sandy, only I did worship Dell, and then I wanted to be his. Only it was later—oh, Sandy, how can I tell it to you? I want to be free. And then I saw you."

Sandy said, "What about this Tailspin horse?" So Amy Lou told him how the bay pony was her engagement present, and she expected she'd have to take him back to Dell.

Sandy looked at her out of worried blue eyes. "You telling me all this straight?"

"Honest!"

"Well, Amy Lou, I like to be a square shooter. I don't like fellows that fool with other fellows' girls. I guess we got to take Tailspin over to Dell's, and I'll ask him can I have you, and if he wants to thrash me, why I guess I got it coming."

Amy Lou was angry. "Everyone makes me tired. This being owned by someone. I don't like it. I'm me. I'm not Dell's old horse or cow or crippled deer. Can't I decide what I want to do with myself?"

"Not till you got more sense. You catch up your bay pony and we'll talk it over fair and square with Dell. It's the only right thing to do."

So they walked out in the pasture and whistled for Tailspin. When he came Amy Lou put a rope around his neck and slipped a half-hitch around his nose, and jumped on him bareback. Sandy mounted his borrowed horse, and they headed for Dell's,



"Hi kids! Come down this way!"

59

along the river trail. They let their horses walk slowly, and the sun was down by the time they reached Dell's.

HE was out by the barn, finishing the evening chores. Sandy dismounted and introduced himself. He said, "Amy Lou's got something to ask you. And I got to apologize, and explain that I didn't know Amy Lou was engaged to you."

Dell looked at them quietly. From his expression you couldn't tell how

he was going to take it.

Amy Lou didn't know how to begin. She slipped off Tailspin and handed him to Dell. "Here," she said, "I'm returning him."

For a minute, Dell looked at the little horse as if he didn't recognize him. Then he took off the rope and gave him a friendly slap. Tailspin walked off a few steps and came back.

Amy Lou said, "Dell, I can't be engaged to you any more, I'm going to marry Sandy and go off and see the world"

Dell turned to Sandy. "Suppose you tell me all about this."

Sandy told him, and Dell listened carefully. He asked, "And you aim to marry her properly, preacher and book and all?"

"That I do," Sandy said, and to Amy Lou's ears this sounded as solemn and binding as the marriage

ceremony.

"I see," Dell said. He started to make a cigarette, and Amy Lou wished she weren't watching. He spilled some tobacco, and Amy Lou thought that was odd. Dell's hands never did shake. They were the firm, strong sort of hands.

He said to Amy Lou, "And you want to go off and follow the rodeos around?"

"I guess I do."

Sandy said, "I feel like a snake. I don't like taking anyone's girl away."

Dell fumbled for a fresh cigarette paper. "I guess you didn't take her from me. Anything that ever really belongs to a man can't be taken away. You can't rightly own anything that doesn't want to be owned. I just believe I was mistaken."

"No hard feelings then?"

"None at all. Now if you'll just get on your horse, I'll lift the lady up behind your saddle, and you'd best be on your way."

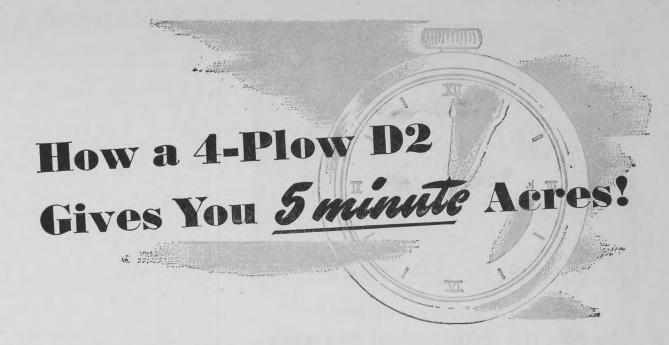
Amy Lou felt her heart going fast. "You mean we're unengaged? It's all

right if I go?"

"Nothing to stop you," said Dell, and picked her up. There was just a second when she had a feeling he was going to kiss her, but he didn't. Then she was behind Sandy, and Dell slapped the horse's rump. As they went galloping along the shadowy, leafy trail, Amy Lou heard Tailspin whinny, and listened for the sound of hoofbeats. It was natural for a loose horse to follow a ridden one, but Tailspin didn't come.

Amy Lou saw an overhanging branch and did something she hadn't done since she's been grown. She reached up and caught it and let the horse run out from under her. She swung in an arc, landed on her feet, turned and started running.

Dell was standing where they had left him. He opened his arms wide when he saw Amy Lou, and she ran into them, and they closed around her tight. But she wasn't worried. She knew those arms would never hold her where she didn't want to stay.





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P.F.R.A. Goes On

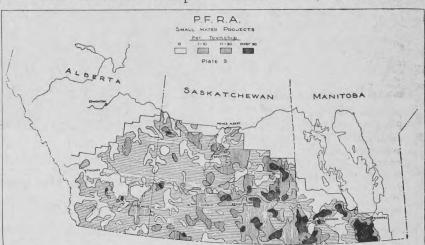
The fundamental work of conserving the maximum amount of moisture from limited supplies continues year after year

HEN the Prairie Farm Rehabilitation Act was passed by the Dominion Government in 1935, it was, in part, a belated attempt to right a wrong which had been done by the same government many years before. In the early years of this century when settlers poured from eastern Canada, from the United States and from many European countries across the Canadian Prairies, and were permitted to take up almost any land that was not already reserved for the railroads or the Hudson's Bay Company, they settled on much land that was unfit for cultivation. It required the double catastrophe of the thirties to bring home to the people of Canada the enormity of their earlier sins, and the realization that a sound and direct, as well as a persistent, effort would be required to bring back much of this land to its proper and more limited

It had also become abundantly apparent that in a land so limited in pro-

the Prairie Farm Rehabilitation Branch of the Dominion Department of Agriculture records the establishment of 45 district experimental substations in the Prairie Provinces-six in Manitoba, 23 in Saskatchewan and 16 in Alberta-for the study of droughts and soil drifting. Supplementing these are Agricultural Improvement Associations, which in 1940 numbered 229 associations with 33,600 members. These numbers have since decreased. Eight hundred large-scale regrassing experiments were undertaken and 400,000 lots of grass seed distributed to Agricultural Improvement Associations, which led to the seeding of three million farm acres to cultivated

The establishment of community pastures, which by 1938 had reached only 14 in number (with grazing for only 3,231 head of livestock), had increased to 76 ten years later. These 76 community pastures occupied 1,436,480 acres, and pastured 71,393 head of livestock, which were owned



Map showing water development and small water projects in prairie provinces.

ductivity by available moisture, it was the responsibility of the national government to effect the conservation of this moisture by every available and reasonable means. Consequently the attack made on the basic problems of Prairie Canada was fourfold. First, by returning much of the land unsuited for crops to pasturing. (The development of huge and numerous community pastures within the P.F.R.A. area was the result.

Second, by attacking cultural practices and the development of ways and means of conserving moisture and avoiding wind erosion by the evolution of suitable tillage methods.

Third, by trapping runoff water into dugouts and stock-watering dams, so as to safeguard the water supply of livestock populations, while at the same time encouraging the development of small irrigation projects which would make possible, even in dry seasons, the maintenance of farm gardens and minimum supplies of livestock feed.

Fourth, by entering upon largescale water developments in which the wasted water supplies of rivers and streams, from the Rocky Mountains to Winnipeg, could be conserved and impounded behind huge dams for judicious distribution through irrigation channels and thus taken to hundreds of thousands of acres of thirsty soil

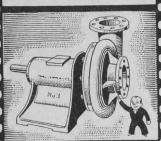
The most recent annual report of

by 5,280 owners. For the 11 years beginning in 1938, an average of 45,700 head of livestock has been pastured each year, and 7,500 cows bred with purebred, beef-type bulls. On these pastures, more than 500,000 acres of abandoned farmland has been reseeded to crested wheat and other grasses, so as to greatly increase the available grazing. Feed supply on community pastures was also supplemented by irrigation projects, where water supply was available. The result was that in 1948 one unit of livestock pastured on 20.5 acres instead of 58.7 acres as in 1938.

THE Land Utilization Branch of P.F.R.A. has also been responsible for rehabilitating and resettling a total of 2,696 farmers who formerly resided on submarginal land, on other lands under irrigation development. Such projects as Val Marie, Maple Creek and Swift Current in Saskatchewan, and the Rolling Hills in Alberta, in addition to over 600 smaller, organized projects in the three provinces and 1,398 individual projects, have accommodated this resettlement.

By March 31, 1949, a total of 144 small community water-development projects and 37,467 individual projects had been completed at a total cost of \$18,297,322.14. In Manitoba these include 8,799 dugouts, 293 stock-watering dams and 19 small irrigation projects; in Saskatchewan

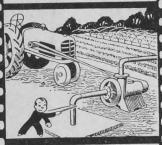




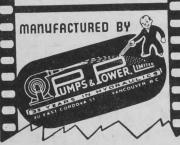
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20,730 dugouts, 3,182 stock-watering dams and 744 small irrigation projects; and in Alberta, 1,696 dugouts, 1,577 stock-watering dams and 424 small irrigation projects. Since most of the water available to the Prairies in streams and rivers has its source in the Foothills and the Rocky Mountains, the largest number of largescale water-conservation projects to be found in Alberta. To a considerable extent the P.F.R.A., until recently, has been concerned with the repairing and extending of old, wellestablished irrigation enterprises. These include the Canada Land and Irrigation Company, the Magrath Irrigation District, the Eastern Irrigation District, including the Rolling Hills project, and the Leavitt and Mountain View Irrigation Districts. Eleven large P.F.R.A. projects utilize water from the Cypress Hills, which extend into both Saskatchewan and Alberta. Nearly 50,000 acres of irrigated and irrigable land have been developed in the Val Marie-East-End area, in the Maple Creek Irrigation District and the Rush Lake Irrigation Project. Work under way now along the Souris, Wood and the Qu'Appelle Rivers will eventually add another 40,000 acres of irrigated land.

During the postwar years several large water projects have been under development and investigation. These include the St. Mary-Milk River Project, which will utilize the waters of four rivers in southern Alberta; the St. Mary, the Milk, the Belly and the Waterton Rivers, with their tributaries, will ultimately develop an additional area of close to 375,000 acres for irrigation purposes at a total cost of more than \$15 million. Another project in east-central Alberta is the Red Deer Project. This will be an extension to the old William Pierce stock-watering scheme, once known as the North Saskatchewan Irrigation Project. This project also is expected to irrigate 500,000 acres of land at a cost of about \$15 million. The third project, on which much investigation and work has been done, is the South Saskatchewan Project. Preliminary and supplementary surveys give an indication that this project might conceivably cover 650,000 acres at a cost of approximately \$66 million.

Just recently, L. B. Thomson, director, P.F.R.A., has said that preliminary surveys and exploratory work indicate that it may be possible to reclaim one million acres of land in the Carrot River triangle in northeastern Saskatchewan and north-western Manitoba, All such larger schemes are subject to a sharing of the costs between the various provincial governments and the Dominion government. In process, at this writing, are negotiations between the Governments of Alberta and the Dominion as to the sharing of the cost of the huge St. Mary-Milk River development now under way.

When added together the achievements of P.F.R.A. in this 15-year period have effected an amazing transformation in the drier portions of the Prairie Provinces. Only last month Hon. J. G. Gardiner, minister of agriculture, announced that draft legislation had been prepared, making the P.F.R.A. applicable to the four western provinces instead of to a limited prairie area, as at present.



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HE only known treatment of seed wheat or barley for loose smut is the hot water treatment of presoaked grain. It is necessary to soak the grain for a minimum period of four hours prior to treatment, then to submerge it in hot water and hold it steadily at a temperature of 127-129°F. for 10 minutes in the case of wheat, and for 13 minutes at 126°F. with barley.

This method of treatment can be applied at home, but it is very awkward and troublesome. Moreover, the temperatures and time limits must be adhered to rigidly, because the smut fungus, which overwinters within the germ of the grain, must be killed without injuring the germ. The result is that while there is a considerable amount of loose smut to be found within wheat and barley seed, the treatment is very seldom given.

There have been several attempts to design a machine for this purpose, but most of them have been quite cumbersome and have possessed serious limitations. Finally, Professor James Scott, Department of Agricultural Engineering, Ontario Agricultural College, Guelph, designed a new seed-treater which is a circular, fivecompartment, electrically heated and power-agitated machine, which will raise the temperature of a quantity of grain from about 65°F. to 128°F. uniformly in less than one minute. It will hold the temperature so secured

HOT WATER SEED-TREATER

Special equipment, designed at the Ontario Agricultural College, permits treatment of wheat for loose smut at 25 bushels per hour

within one degree, for a period of ten minutes.

The machine is reasonably automatic and foolproof, and will enable the treatment to be cut off sharply at the end of a ten-minute period. It is compact, possesses reasonable capacity and can be operated by one man.

The machine is intended for community rather than for individual use, owing to its size and cost, and the limited period of use for any individual. Specifications in detail can be obtained, but for general information it is perhaps sufficient to say that the baskets, which in shape and size are segments of a circle, are 27" on the arc, 24" on the side and 16" deep. They have copper bottoms with 1/16" perforations, and are mounted on a top framework of 1"x1"x4" angle-iron. The heaters are two 3 kw. immersiontype heaters, and the thermostat is sensitive to one-half of one degree from setting. The motor is a one-H.P. electric motor, and the speed reducer is a 40 to 1 reduction worm-andwheel type.

S to the operation of the treater, A s to the operation of here are Professor Scott's own comments:

"(1) In order to raise the temperature quickly and uniformly the baskets have solid sides and perforated screen bottoms, and are raised and lowered in the water bath at twenty cycles per minute. This takes advantage of the fact that wet seed grain is only slightly heavier than water, and when the downward movement of the basket causes the water to surge up through the perforated bottom, the grain floats freely in the water and comes readily to the required temperature. The upward movement of the basket drains off the slightly chilled water so that a fresh portion of heated water can be utilized on the next downward stroke. To further accelerate the raising of the temperature the two 3 kw. immersion heaters and the thermostat that controls them are grouped immediately below the preheat position. A high-capacity circulating pump is also employed to ensure that ample water at 128° is supplied to the grain being preheated.

"(2) All the baskets are attached to an open, angle-iron framework and are agitated continuously by being surged up and down at the rate of 20 cycles per minute. The tank, holding

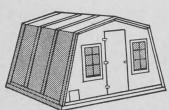
200 gallons of water, is insulated with two inches of fiber glass, protected by a sheath of 28-gauge galvanized iron. This quantity of water, when heated to 128°, forms a reserve to hold the grain at treatment temperature after preheating. The circulating pump previously mentioned, assists in preventing the settling of layers of cold water at the bottom of the tank.

'(3) The baskets are hinge-mounted in the agitator framework and can be swung upward and outward, assisted by the up-and-down movement of the frame, allowing the heated grain to be spilled slowly through the air onto a dryer-conveyor, or if necessary into a cold-water bath. This cuts off the temperature sharply at the termination of the treatment period.

"(4) The temperature is controlled by a very accurate thermostat guaranteed by the manufacturer to be sensitive to plus or minus one-half of one degree. This thermostat operates a magnetic contactor which actually switches the heaters on and off. The timing of the treatment is done mechanically through 'v' belt and sprocket-chain reduction to a geared speed-reducer that drives the timing cam. At two - and - one - half minute intervals this cam operates the timing gear to rotate the framework and the baskets through one-fifth revolution. The grain is always dumped into the basket in the preheating position and

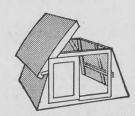


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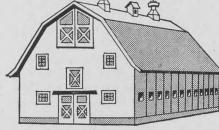
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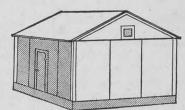
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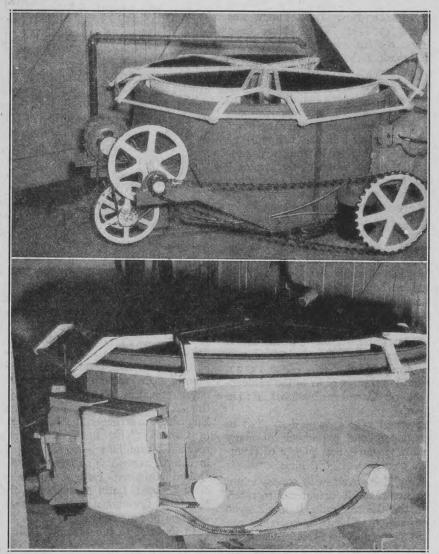
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the basket will be at temperature before movement commences. The grain basket remains two-and-one-half minutes in each of four positions before turning again into the preheat position. As soon as the basket returns to this position the operator dumps it to terminate the treatment. This particular basket can then be recharged to repeat the cycle.

and-one-third minutes at each position instead of two-and-one-half minutes. Hot water treatment of various vegetable seeds is also recommended for the control of seed-carried fungus diseases. The ten-minute immersion period is normal, with various temperatures recommended depending on specific variety and disease. Thermostat settings can be made in a few



Top: General view of hot water seed-treater showing triangular baskets. Bottom: Front view showing two 3-kw. immersion heaters, thermostat and magnetic contactor switch.

"(5) It is quite practical for one man to operate the machine at full capacity, provided the grain is brought to the machine and taken away from the machine by someone else. The operator would be required to load and empty the baskets and to check periodically the mean water temperature of the machine. It should be appreciated that if the temperature of the incoming grain is too low, the capacity of the machine might be exceeded and it might be cooled below its effective range. The operator would then have to cut down the size of the batches to the point where the immersion heaters could hold the temperature of the machine between 128°F. and 129°F.

"(6) The capacity of the machine under the best conditions is in the neighborhood of one bushel of grain per basket. This means a bushel every two-and-a-half minutes of operation or about 25 bushels per hour. This figure might drop as low as ten bushels per hour if the seed grain were particularly cold.

"The adaption of this machine to treatment of seed barley is under way at present and presents no complications. Barley seed treatment calls for 13 minutes at 126°F. and this can be obtained by changing the sprocketratio of the timing gear to give three-

moments, with the circulating pump operating and using a standardized thermometer for accuracy, to any temperature required."

New Concentrated Food

THE Norwegian Information Service reports that scientists in Norway have developed a new emergency food, superior to any now available. This concentrated food, known as KG-12 meets many of the shortcomings of earlier emergency foods. Perhaps one of its greatest advantages is its liquid form. This means additional water supplies are not necessary when it is used.

Norwegian soldiers recently completed 14 days of training with KG-12 as their only source of nourishment. More recently four men spent five days in two rubber rafts in the Oslo Fjord. Two of the men were given KG-12, and the other two were given an equal volume of what has, up until now, been considered the best of the foreign-produced emergency foods. At the end of three days the men subsisting on KG-12 had plenty of supplies left, and showed no signs of fatigue. The other two men were running short of both food tablets and water.

The product, which includes amino acid, is going to be patented, and may be produced in exportable quantities.



When Writing to Advertisers Please Mention The Guide



HEALTH MEANS WEAL ON LIVESTOCK FARM

The first essential of running a successful livestock farm is the good health of animals. Several factors contribute to maintaining health: proper feeding, breeding and housing, and simple precautions such as allowing no animal on the farm unless it is known to have come from a herd which is free from disease. It is also important to avoid indirect contact with disease through farm equipment, utensils, and transport trucks.

But the biggest factor in disease prevention is proper sanitation — the cleaning and disinfecting of stables, barns and farm

A widely recommended product for this A widely recommended product for this purpose is Gillett's Lye in solution. The reason for Gillett's popularity on livestock farms is that it disinfects as well as cleans. Gillett's kills many microbes, viruses, bacteria and parasites which cause disease. It is extremely effective against the germs of foot and mouth disease, and has recently been recommended by Optario veterinarians. been recommended by Ontario veterinarians as the best cleanser and disinfectant for stables which had housed tubercular cattle.

For general clean-ing, dissolve 2-3 tablespoons of Gil-lett's Lye in a gallon of water and apply with a stiff brush. This solution, disin-fects decolorizes and fects, deodorizes, and cleans thoroughly lifts out grimed-in dirt; dissolves milk traces and milk-stone;

leaves barns, stables, etc., fresh-smelling

BEST FOR SLAUGHTER HOUSES

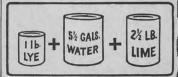
Farmers who operate their own slaughter houses know that cleaning this building can be a long and messy job. But it is

important. Here, too, Gillett's Lye is a great help. Before swabbing down the floors, dissolve 3 tablespoons of Gillett's in each gallon of water. This solution will aid in removing blood, dirt, and other matter. More important: Gillett's disinfects and deodorizes, enables a single colutions between feet to the contract of the contr solution to be used for the complete cleansing

DISINFECTANT WHITEWASH

DISINFECTANT WHITEWASH

The following easy-to-prepare whitewash both improves the appearance of
farm buildings and acts as a long-lasting,
disinfectant. Simply dissolve 1 lb. of
Gillett's Lye in 5½ gallons of water. To
this solution add 2½ lbs. of water-slaked
lime. Apply as ordinary whitewash. (The
action of the lime actually prolongs the
disinfecting power of Gillett's Lye, makes
it even more efficient.)



Be sure to keep Gillett's Lye handy in stables, slaughter houses and in the farm house. Send for the new free book which tells you the many ways in which Gillett's can help you with all farm chores.

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Film Board Fracas

Continued from page 11

From outside Canada the record shows flattering comment came early. Two years after the start of the Canada Carries On "Churchill's Other Island," series. took the Academy award as the best documentary of the year. Reviewing three documentaries in the midwar period, the New York Times was moved to say: "These films have turned the full glare of the spotlight on Canadian thought anent the international scene. . . . They interpret the facts squarely and by doing so have earned the respect of audiences who are struggling to understand more clearly the world in which they live." Later Director-General Lehman, of UNRRA, referring to the NFB produced "In the Wake of the Armies," said it was "A challenging experience to see this brilliant Canadian interpretation of the next step ahead."

In England, the magazine Cinema said of the group turning out NFB's World in Action series: "This Canadian film unit is one of the most vital in the Empire, and without any question it is contributing something worthwhile to international affairs." After the last Edinburgh Festival, the Scotsman remarking on the NFB showings said: "The technique was uniformly good . . . There is a n example for most of us in the achievement of Canada's National Film Board."

Sternest critics don't deny that in the papers and periodicals of many countries you'll find plenty of favorable comment of NFB films.

Now, this government agency might produce some documentaries to entertain the theatre trade. It might even persuade the theatre owners to run these one and two-reeler Canadian items along with the U.S. products. But there was another job. Documentaries of a more or less specialized kind had to be screened for special group audiences outside the regular theatres. They were for women's groups, for farmers, for industrial workers, school children, for other special groups.

Thus the Board made it part of its wartime information work to develop urban circuits for 16 mm. film showings in industrial plants, community halls, trade union halls; and rural circuits for showings in church, school and community halls, wherever a large enough darkened room could be found.

By 1945 the field staff servicing these numbered 139; film libraries totalled 44. This was the peak budget year. Since war's end NFB funds were cut annually until by '49 they were 28 per cent below the '45 figures. Staff was reduced in the period from 787 to 550.

PARADOX of the Board's postwar life has been that while its funds shrank, the demand for what it offered rose sharply.

Fewer dollars, fewer staff members. Men making the rounds of the circuits, operating projectors, were laid off. Problem: How to give people not fewer community and other shows, but more?

This was the tough nut bounced on Ross McLean's desk. Grierson left for other parts in the fall of '45 and postwar responsibilities devolved on McLean. It was done this way: NFB personnel trained members of all sorts of organizations to screen their own shows, to run their own circuits. Communities and provincial agencies were helped to set up their own film services.

Organizations banded together. The Film Council movement began. NFB placed its production on loan in libraries for the use of these councils. The libraries were run by university extension departments, public libraries, departments of education, the National Film Society.

Result: By 1949, 250 film councils had sprung up. At last counting, more than 6,500 urban organizations were members. Further, more than 3,300 rural points had become outlets for 16 mm. films. Number of libraries jumped from 44 at the war's end to 235 at last year's reckoning.

Every month 13,000 different audiences totalling more than 1,000,000 folk now view 16 mm. film shows in this set-up.

Take any camera shot you like of this; it's still trail blazing carried out by Canadian enterprise. Not so many know it in this country, but abroad this co-operative effort of the NFB and our community folk is pointed out as the world model. UNESCO scholarships are awarded to people just so they can see how it ticks.

A quick skim-through of NFB reports last year on distribution in regular theatres (35 mm. films) shows this: 25 short films in French and English were screened in 550 theatres in Canada; NFB newsreel items reached 60 millions here, 320 million in U.S.A., as well as audiences in the United Kingdom, Europe, Australia, New Zealand, Latin America and the Far East. Commentaries might be in any one of nine languages.

In its brief to the Massey Cultural Commission last August, the NFB announced that demands on it were pressing as hard as ever. It recommended changes in its own make-up. In effect, it said that as "a creative producing agency" it was handicapped if it was to keep up with requests for its service.

THE Board asked for Crown company status—something like CBC possesses; some responsibility for television programing here; more money to extend its work. The money would be spent to increase staff with salaries raised to levels of similar jobs elsewhere. NFB personnel are hired on three-month terms. The security of the regular civil servant was requested for them.

Hollywood chains and the domestic short film producers apparently took this brief as their up-an-at-'em signal. From press stories, movie trade papers—U.S. and Canadian, Commons debates, and so on, comes this picture: Hottest after the Board were Canada's small private producers. Last September they formed a new group—Association of Motion Picture Producers and Laboratories of Canada.

Movie trade papers told how little private enterprise—U.S. and Canadian—liked NFB and CBC proposals on television. They considered both the government agencies "monopolistic." Both needed curbing if the private film industry were to get a share of TV business.

One private film-maker wanted a

refurbished Film Act to establish a new body over NFB. This would help get around the NFB checks on companies making films for governments. NFB had hinted at a tax on U.S. movies, it was said.

A financial paper saw red. It asserted the Defense Department couldn't use the NFB units for secret work. The agency hadn't been completely screened. In Parliament, Tory M.P.'s tossed this story at government benches. The debate is in Hansard and history. The resignations of NFB commissioner McLean and his top aid, Ralph Foster, are history too. So also is the naming of magazine editor Arthur Irwin, as new head.

But some things in all this made the Board's defenders wonder. Among other items, they point to a story in Variety, U.S. entertainment industry bible, datelined Toronto, December 20. It reported on the Claxton story and treated the red scare business this way: "Probe reputedly started when J. H. Fitzgibbons, president of Famous Players Canadian, complained to the government that the NFB was moving too strongly into the TV field to the detriment of the Canadian film industry."

There were those who saw Hollywood's arm reaching over the border.

Another puzzle was the persistent story that the NFB's chairman, Hon. Robert Winters, had journeyed to Montreal before the McLean-Foster exit. There the new minister was said to have been taken in by the private film boys. Impressed by representations made to him, so the story goes, he allegedly agreed to collect the resignations of the two Board men. Whatever happened, l'affaire Film Board left a high scent.

BEFORE the Irwin accession February 1, it got out that the axe had struck five more NFB people. In all, 40 would be getting the chop, a well-authenticated story had it.

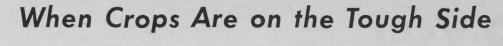
Then these organizations protested: Ontario Association of Film Councils, Canadian Adult Education Association, United Church of Canada, I.O.D.E., Canadian Citizenship Council, and B.C.'s Federation of Film Councils. The requested resignations were reported withdrawn.

But here's what happened since: Arthur Irwin took office February 1 as head of a morale-shaken staff. Soon the axe was said to be swinging again. This time the number of victims was placed at four.

About this time a three-article expose of the attack on NFB appeared in the Ottawa Citizen. Next move: P.C. Chief George Drew in a presession speech needled the government for delaying NFB screening. Ontario's Federation of Film Councils took the next move: It had The Citizen's expose reprinted and circulated to the 6,500 organizations affiliated to councils nationally. It sent out a call for country-wide protests.

Then the grass roots stirred and the protests began to pour toward Bob Winters. The people began to fight back. They were not going to have any Hollywood smart-alecks tell them the kind of pictures they wanted to see.

This is one thing too big for Holly-wood to handle. They have discovered they can't push around the Canadian people.



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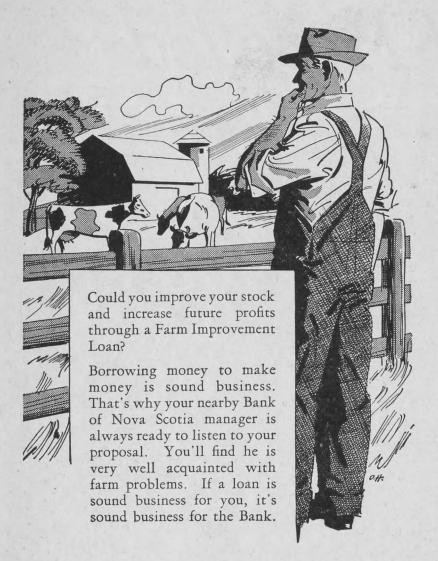
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Artery For Oil

Continued from page 7

pipe line vital to the expanding economy of Alberta, but it will mark the historic development of our nation as one of the greatest oil-sufficient areas of the world.

Into this gigantic undertaking will go 175,000 tons of high-test steel for its 1,150 miles of pipe. According to officials, "This would be enough for 1,000 miles of main line railway track. Or this steel tonnage would make 2½ ships the size of the Queen Elizabeth. Or it would make 118,000 average-sized motor cars.

"Merely to fill the pipe line," they continue, "will take 1,838,000 barrels or 64,330,000 gallons of oil"—enough to supply all the needs of Canada for six days. "If the oil were gasoline, it would be enough to drive an average passenger car 1,158,000,000 miles—46,300 times around the world."

On the first lap of its journey—between Edmonton and Regina—the line will have an initial carrying capacity of 95,000 barrels daily. Plans call for the completion of this phase of the line this year.

From Regina to Gretna, the 16-inch pipe will have an initial capacity of 70,000 barrels daily. The last lap of the artery, between Gretna and Superior, will, likewise, be capable of transporting 70,000 barrels of oil daily. These two sections are expected to be finished by the spring of 1950.

THE pipe line trench, five feet deep and two feet wide, will entail the excavation of 2,250,000 cubic yards of earth. Patrol by air is necessary to guard against "leaks," which could prove costly—and for this patrol, landing strips will be constructed at some of the pumping stations not located near existing airports. From the Wisconsin terminus, Pipe Line Tankers Ltd., a new Canadian company, will transport the oil to Sarnia. This company is spending almost \$8,000,000 to build two of the largest and most modern oil vessels on the Great Lakes.

Again, in an undertaking as vast as this, distances and costs become abstract words. At Edmonton, a mile east of the Imperial Oil refinery, where two of the six great storage tanks of the western terminus are due for completion, it is a drama of immensity to watch welders and steel workers battling against the construction deadline.

Each of the big tanks, 144 feet across the base and 48 feet high, will hold 140,000 gallons of oil. The volume of crude oil to be moved each day would fill about 15 grain elevators. The steel plates going into the structure are lifted by derrick and run into position on a "roofing buggy." The bottom row of plates weigh about five tons each, measuring 32 feet long and eight feet wide. The top plates are honed down to a ton in weight, while the roof caps are one-half ton in weight, each one measuring 20 feet long and six feet wide. There are 540 tons of steel in each tank. The schedule calls for the completion of all six tanks by autumn, and officials say there may some day be as many as 20 such other-world monsters here, as the development of Alberta's oil resources

Oil "development" is, in a nutshell, the reason for the giant pipe line. Prior to 1947, Canada had virtually resigned herself to being an oil-dry nation, largely dependent on imports for her own needs. Without a major find since the Turner Valley discovery, oil companies sunk millions of dollars in approximately 1,000 dry wells. Many of the explorers left Alberta in disappointment. Before the great Leduc blow-in, Alberta's oil reserves totalled only 35,000,000 barrels. Canada imported approximately 90 per cent of her oil-which last year cost the Dominion \$300 millions in U.S. currency, approximately our deficit in American dollars. All the while, Imperial plugged on, spending \$23,000,000 before their search for oil was rewarded. As one of their officials told me, "For our trouble, we got 114 dry holes and a lot of grey hair.

Then came Leduc.

THE Leduc field was estimated to contain some 250,000,000 barrels of oil, and was followed by an even greater sensation—Redwater—with a reserve estimated at 500,000,000 barrels.

The discoveries continued apace, embracing Golden Spike, Joseph Lake, Bon Accord, Stettler, Excelsior, and even Normandville, far north in the Peace River country. Golden Spike has the thickest oil-bearing formation ever discovered in Canada—more than 545 feet. More oil promoters, big and little, are in the field than ever before.

Oil? There is oil aplenty. Reserves are well in excess of one billion barrels, and as the search goes on apace, says Loren F. Kahle, president of one of America's largest oil pipe lines and executive vice-president of the Interprovincial Pipe Line Co., "it is possible that the reserves may grow to around five billion barrels in the next five years or so." This would be more than enough to supply the usual needs of the nation for the next quarter-century.

So much oil, so suddenly, poses a problem. What to do with it? The prairies consume about 61,000 barrels daily. Under rates approved by the Alberta Conservation Board, the present wells are now producing somewhere around 125,000 barrels daily. Since Canada as a whole consumes 290,000 barrels of oil a day, the pipe line is a vital necessity-not only to save the Canadian market another \$40 millions per year in U.S. dollars, but to continue the exploitation in Alberta. For once an oil boom gets under way, there is no stopping it. Leases and rentals must be worked to remain in good standing, otherwise they revert to the government. Oil in the earth brings no returns either to investors or to the province. Alberta oil must find itself other, "competitive" markets, hence the pipe line.

Why not rail transportation? Crude oil is a world commodity. "Oil has to pay its own way to market," as the pipe line officials point out. "When the producer looks at crude oil prices in some distant market he must always remember he doesn't get that price for crude until it's delivered. It's up to him to pay the cost of getting it there."

Specifically, a pipe line will move oil at about one-third the cost of railway transport. Oil from the U.S. is presently being delivered at Sarnia from the states of Oklahoma and Illinois for approximately \$3.53 a barrel. To ship a barrel of oil from Edmonton to Sarnia by rail costs approximately \$3.25. The Alberta producer would get 28 cents a barrel for his investment, his costly machinery, his labor—no incentive to continue production or search for new fields.

By pipe line and lake tanker, officials point out, "markets in eastern Canada might be somewhere around \$1.00 a barrel distant from the Alberta producer." A market \$3.00 away is out of the question. A market that's roughly \$1.00 away "may be quite attractive, may even lead him to intensify his efforts in the field."

This is the underlying reason behind the story of Interprovincial Pipe Line. For the same economic reason, the line is not all-Canadian in its location: it avoids 121 miles of rough terrain in northwest Ontario — a distance that would add some 12 per cent to the cost of constructing a purely-Canadian line and which would require approximately 20 per cent additional in maintenance costs. Canadian lakehead cities will receive as much oil and at a lower cost than if the line ran directly from Edmonton to Fort William or Port Arthur.

IN terms of dollars, the decisive factors influencing the choice of the Superior route were multiple: the saving of at least \$10 millions in initial construction costs; saving of about \$1,000,000 yearly in operating costs; the elimination of difficult engineering problems; and the larger saving of American dollars which will be realized a year sooner because of the time saved in building the shorter line-some \$40 millions of U.S. dollars, over and above the \$90,000,000 in American funds already being saved by western oil production. Though the oil magnates talk in terms of millions of dollars, they calculate profits in terms of cents per barrel on a gigantic investment. "If you make it 10 cents more expensive to take something to market," says Kahle, "that commodity is worth 10 cents less at the point of production.'

Behind the building of this great oil artery lies the hand of Imperial Oil. However, Imperial's big concern was in getting oil to market, not in building pipe lines. Today, Imperial retains only a one-third equity in the new company; other shares are held by smaller oil companies and hundreds of small investors. It is calculated that of the \$90 millions needed to finance the venture, \$85 millions will be used in actual construction work-and of this, some 30 per cent will be spent in direct labor payrolls-while the remaining five per cent will be used as working capital. On its investment, Interprovincial hopes to earn between \$1,200,000 and \$3,778,000 yearly, depending on the volume of oil transported. Tariff rate will be set at 4.785 cents (slightly under five cents) per 100 "barrel miles"-though this may well be adjusted when actual operations on the line prove it to be either a more expensive, or less expensive, operation than the officials now foresee.

Behind-the-scenes activity in connection with the line began about two years ago. As hordes of experts planned the big undertaking, aircraft mapped the proposed route. In the winter of 1948, a drill crew worked for many cold days on the ice-swept wastes of the South Saskatchewan

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Dow Sodium TCA 90% Controls Grasses



This new grass killer offers an effective means of spot-treating local infestations of certain noxious grasses in crop

lands and pastures as well as overall treatment of grasses along roadsides, irrigation and drainage ditches, fence rows and right-of-ways. It has been tested and found effective in controlling perennial grasses such as quack (couch or twitch) and Canada Blue. At lower dosages, it will suppress both annual and perennial grasses such as crabgrass, foxtail, chess, bluegrass and redtop, leaving a grass cover where desired.

FIELD NOTES

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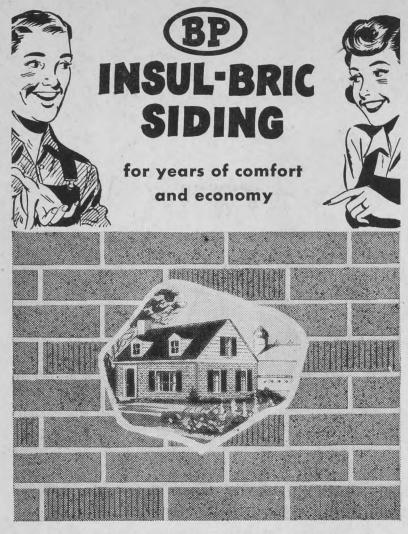


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river, near the town of Outlook, probing for a suitable crossing. Scientists studied the effects of frost penetration into the soil, the action of corrosion; while engineers calculated the minimum thickness of steel pipes required. Contracting alone was an immense job, with the company stipulating that, wherever possible, local labor be used on the project. Steel is being rolled at Hamilton and made into pipe at Welland, Ontario; and scores of other Canadian centers are sharing some of the \$44,000,000 being spent for materials.

THOUGH the pipe line was envis-ioned with the realization that Imperial had opened new pages of oil history in Alberta, there were many difficulties to be overcome before the go-ahead signal could be given. Chief of these was the shortage of steel. In 1948, the steel shortage was at its worst. Canada, the U.S., the United Kingdom and Europe were canvassed. The answers were the same: "Maybe in 1952 or 1953"—an impossible reply to an oil production that was expanding daily. Finally, L. E. Bury, then manager of Imperial's purchasing department, called in A. E. Rubery, his assistant, and gave him orders. "Bert, we've got to get pipe. Pack a bag and don't come back until you get it.

"Bert" went shopping. He asked the help of the Canadian government in arranging steel imports from Britain. Sir Stafford Cripps, visiting Ottawa, sat in on the discussions. Finally, it was arranged—Britain could send 30,000 to 40,000 tons of plate to Canada in 1949.

As this is being written, the office from which all operations will be directed, has opened in Edmonton. Pipe lengths are being unloaded along the railway lines. As soon as the frost is out of the ground, the general work of laying the pipe line will begin.

Then, as Loren Kahle says, "our presence will be pretty obvious." There will be large trucks driving on the highways. Giant ditching machines, "probably bigger than any seen in Canada before, will creep across the country, cutting a smooth trench and neatly piling dirt along-side. Heavy tractors with side booms for handling the pipe will be working. Smoking dope kettles will be heating the coal tar protective material as it is applied to the pipe."

While there will be some temporary disruption of the normal traffic on side

roads along the route, this will be reduced to a minimum. Land will be restored quickly, fencing and roadway repaired. The line will cross 991 secondary roads, 73 main highways and 59 railway tracks. When the job is done, and the fields are disked above the buried tube of steel, only small markers left at road crossings will indicate such a line ever existed.

IL pipe lines, while a novelty to most westerners, are nothing new in the history of fluid transportation. The first "pipe line" was probably a hollow log, bringing water downhill from a spring. About 5,000 B.C., the Chinese used bamboo stalks as water pipes. The first oil pipe line-made entirely of wood-was laid in 1861 in the Pennsylvania oil fields. It was six miles long and ran downhill to Oil City. But it was not a success. "Crude skinners," earning \$30 a day for carting the oil, burnt or broke the pipe line at night. They liked their pay cheques too well to welcome technological advances.

Today, all over the world, tubes of steel have created great oil transportation systems to supply the vast demands of the 20th century. Oil heats homes; runs factories; lubricates machines; powers our automobiles, tractors and combines; drives our steamships and locomotives. Our generation virtually moves on oil.

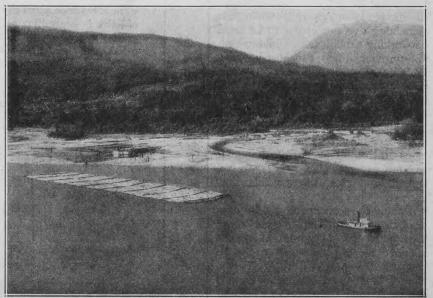
The United States has the world's greatest pipe line system—with more than 130,000 miles of crude oil lines and almost 20,000 miles of product lines

In the Middle East, there are 1,724 miles of crude-carrying lines, and 3,474 miles of pipe planned or under construction.

The U.S.S.R. has virtually no pipe line mileage.

The construction of the line from Edmonton to the lakehead will give Canada one of the great oil transportation systems of the world. Oil—and its wake of allied industries—is skyrocketing Alberta into position as the wealthiest province of the Dominion. Since one of the really sore spots in our national economy is the expenditures for foreign oil, the availability of Alberta crude will go a long way to overcoming the nation's shortage of foreign exchange. By 1955, or shortly after, Canada will have all the oil she needs—produced at home.

To these ends alone, whether for peace or war, the pipe line is vital.



Towing a boom of logs in British Columbia.

VICTORY OVER

WEDDS



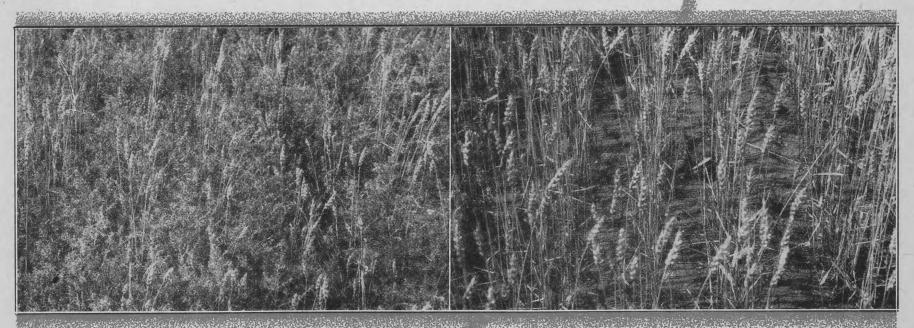
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Treated and untreated portions of the same wheat field at Borden, Sask.

—Courtesy The Country Guide.

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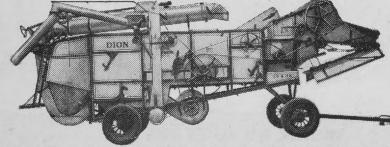
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No More Supermen?

Are modern times likely to produce any more athletes like some of these out of the history of sport?

by HARVEY DAY

THLETIC associations in most countries are now busy grooming their champions for the Olympiad in 1952. Though the games are a long way off to the man who has no personal stakes in them, they are an important event in the life of most of the prospective competitors.

In some countries scouts are permanently on the lookout for talent. When a possible world-beater is spotted he is placed in the hands of an expert, who rectifies faults in his style, increases his stamina and tries to add yards to his speed.

This applies to nations like the United States and the Soviet Union, which have almost unlimited resources; to Finland where youngsters begin long distance running at school; and also to Britain, the only country where more often than not, the loser gets a heartier cheer than the winner. But what of the lesser nations which have occasionally produced superlative athletes?

Any nation throwing up a Mensen Ernst, who the Norwegians swear was the finest long distance runner ever to don spikes, must have a pool of rugged athletes who can worry the best that the world can produce. Had Ernst been trained for shorter events and entered in the Games, would he have eclipsed the great Paavo Nurmi? His countrymen think so.

Let us take two of his great runs. One magnificent effort was from Paris to Moscow in two weeks, over poor roads, in dirty weather, during which he swam 13 rivers, and averaged 125 miles a day! An even greater run was from Constantinople to Calcutta and back, in which he covered 5,625 miles and averaged 95 miles a day. He not only swam rivers but crossed deserts and mountain ranges on his way through Anatolia, Persia, Afghanistan and India. Travellers who know these arid tracts will marvel that he had the energy to

What mincemeat Ernst would have made of the marathon, for he ran fully clothed and shod, with a light pack on his back!

There are men among the famous Tarahumara Indians of Northern Mexico who could emulate such feats. They live for running, and a member who cannot run well is despised. Racing is their national pastime, and even women and children are distance runners, though the women run among themselves. A religious significance is attached to their races, which are held between teams of neighboring villages, on courses that lead over mountains and streams. Each team kicks a ball which must be in its possession when it crosses the finishing line. The races are watched anxiously by the older tribesmen, who bet heavily on the result, and during darkness the course is illuminated by torchlight. After each event certain religious rites are carried out.

Trainers who are interested in these men and have tried to train them for international events say that civilized conditions affect them adversely, and short distances find little favor with them. They are at their best over 100 miles.

Some years ago two of them bore a letter from the Governor of Hidalto State to the Governor of the Federal District. It was no feat for them to cover the 621/2 miles in 9 hours 37 minutes, and they were astonished, on reaching their destination, to find themselves acclaimed as heroes. They run at a steady trot, body bent slightly forward, toes inclined in. Mexican ranchers often employ them to run wild horses into a corral; the horses, when caught, are frequently on the point of exhaustion, while the Indians are comparatively fresh.

Some years ago a national newspaper published the story of a wild boy in Arabia, reared by gazelles, who could run at phenomenal speeds, keeping pace with the herd. He was tracked, and eventually run down by car and captured; but the vehicle raced for an hour at more than 50 miles an hour, before the lad fell exhausted! What became of the boy? Did they release him? Had he appeared at the Games in London in 1948 he would have smashed every record from 50 yards to 50 miles; records that no living athlete could ever hope to equal.

BUT it is not only in running that some savages would astonish us. What would become of the high jump record of six feet eleven inches if men of the Watussi tribe, in Ruanda-Irundi, part of the Belgian Congo, were allowed to compete? These are giants who live in country ranging from eight to ten thousand feet above the sea. A six-footer is considered short among them, for many exceed seven feet. Impressively erect, they wear a toga slung across one shoulder, and a skirt which sweeps the ground. They move with languid, feminine grace, and wear long matted hair moulded into fantastic shapes and

Much of their leisure is occupied in dances which continue for hours and develop strong, springy leg muscles. They excel in exercises of agility, in javelin throwing, archery and high jumping, and recently have adopted football, which they play with skill. But jumping is their tribal sport and their crack men leap more than eight feet, with a take-off of a few inches. Most of them can leap over the head of an average man without any takeoff. The oddest thing about their jumping is that they use the "West ern Roll," a technique evolved and developed-so the Americans imagine -within the last few years. But the Watussi have jumped this way for

In 1907, when the Duke of Mecklenburg visited the territory-then under German rule-King Musinga entertained him with games of skill. And it was during this display that the astounding jump of eight feet, five inches was recorded!

Men in olden times were naturally strong, though not as tall as they are today. One has only to examine the physiques in famous paintings, or cartoons of artists like Hogarth, Gilray

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and Rowlandson, to see that they were built on Herculean lines. Fifty years ago men thought nothing of walking five miles to work and another five home. What modern would consider, for instance, carrying his wife to a fair, as did a man named Munsch, of Graz, Austria. In 1900 he had a special cane chair made to fit his broad back, and in this his plump frau sat; and with her he trudged to Paris, 720 miles away, in order to win a bet that they would visit the fair on two legs only.

I have seen Bhutia and Nepalese porters meet trains at Darjeeling and carry individuals, in chairs, a mile or more uphill to their homes. I have seen a woman porter place a cottage piano - slung from her forehead - on her back, and walk away uphill with it. And there is a case on record of a Hindu porter at Rajpur, India, who carried a load of books weighing 380 pounds along a gradually rising road, to a house eight miles away in three hours. Try to raise 300 pounds an inch from the floor and you will realize what a marvellous effort this was.

Some lifting and carrying feats by native porters would astonish civilized people. Sir W. des Vouex writes that Guiana Indians think nothing of carrying a hundredweight of stores with 80 pounds of plantains on top a distance of five miles at a trot, and a Dr. Morrison was staggered when he saw the loads Szechuan coolies carried. "Some of them," he records, "amble along with weights I can hardly raise from the ground." He states that he has seen them bearing loads varying from 150 to 200 pounds on their heads, jogging along over 40 miles of difficult country in a day.

ON one occasion a Mr. W. Watson, of the Malay Federated States Service, was on a trip up-country when he broke down with a violent attack of fever. His colleagues were deliberating on the best means of having him conveyed to the nearest outpost, and it was decided to rig up a sling to be carried by four men, when a sturdy Dyak of not more than five feet, two inches stepped forward.

"If the Tuan Watson," he volunteered, "will sit in his chair, I will carry him." Watson was six feet tall, and a husky fellow, but the tiny Dyak bore him seven miles to the nearest house.

Many examples of almost incredible stamina of savage tribes have been recorded, none more so than the amazing journey of a Sioux Indian, who made his escape from Fort Abraham Lincoln in December 1873. The story is told vividly by Colonel G. O. Shields in "Blanket Indians of the North West." The Sioux made his escape when a blizzard was raging, and he covered 300 miles in three days without snowshoes. The temperature was 40 degrees below zero, and he had no food, but "Rain-in-the-Face" reached his objective, Woody Mountain, in Canada; then dropped unconscious and did not open his eyes for three days. But such was his physical condition that he was none the worse for his adventure.

The last Olympic Games produced some wonderful performances, but if the world were combed and some of these; unknowns prepared for track and field events, there is little doubt that many of the present figures would be shattered. (APS)





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Department of Travel and Publicity for Ontario. Hon. L. P. Cecile, K.C., Minister

The Sergeant

Continued from page 9

till he nails the cuss he's after. Not Spaulding."

Part of that was for Aurore's benefit; part of it sprang from Dick's unlimited confidence in his friend and superior officer. But Norrys knew better.

One of those five who waited was Apah-Stamik, the Bull Mink. From Norrys and from an Indian runner the Chief had heard what happened to the Piney Crees and the two other bands. The news of it hit him like an avalanche. It thoroughly opened his eyes to what Spaulding had saved him and his whole encampment from. It stirred him to sober thought, and cured him of his stubborn hostility toward the police.

Though the danger was past, the disease stamped out, he walked softly those days-Apah-Stamik. His squawclub was no longer in evidence; he refrained from pounding his chest arrogantly. Out of gratitude to the yellow-striped Sergeant he had come to the post with a potlatch - an exquisite pair of matched silver foxes. Half-guessing that Spaulding, if he ever returned, would refuse the costly present, he had given them to the white man's intended squaw-siche Aurore. It was a gesture so graceful, so utterly at odds with his former contempt of womankind, so respectful, that Aurore could not refuse.

John Ear-to-the-Ground was another of those who waited. He went about tight-lipped, his smoky, hawklike face betraying nothing of what he knew. When the huskies returned he had tried to back-trail them, but their tracks were blotted out forty miles north. Norrys suggested an extended search party.

"What use?" the Indian countered, out of his woods experience. "Beeg snow cover everytheeng up. Bimeby snow go, ice go; then I go. Hunt all summer. Find heem sure? How can tell? How can say where weend blows grey goose feather?"

THAT "bimeby" had come now. The Moon-of-Hoar-Frost had passed, and the Moon-of-Whispering-South-Winds brought promise of an early spring. Some of the larger rivers already had gone out. Except in heavy forests the snow was sodden slush. The horned lark and the longspur were back; mallards, pintails and trumpeter swans were winging north in pairs. In a day or two John Ear-to-the-Ground was starting on his long hunt.

That night when their waiting ended, Norrys had gone outside the post to be alone. Near the clearing edge he leaned against a cord of fuelwood, listening meditatively to the migrants honking overhead across the face of the brilliant moon. A light breeze whispered across the clearing. A zero tang was in the air, but the northern lights were faint, and the dark forest in front of him seemed to stir restlessly, aquiver with the breath of spring.

In the cabin to his left Madame Perrault was putting her three p'tites to bed. In the trading hall her husband was bargaining with some Indians over their tucks of fur. A candle glowed in the window of Aurore's room. She and Dick were

there, talking. Through the curtains drawn back Norrys saw the bright scarlet of Dick's jacket, and Aurore's fine, shapely head and throat outlined against the pane. She was leaning towards her brother, her chin cupped in her hand—wistful, lonely, trying to believe when he assured her that Spaulding would certainly return.

Neither of them in the last few weeks had spoken about their father. He had been gone most of the winter, and they knew something had be-



"Look! I like you to eat here, but couldn't you park elsewhere?"

fallen him. The Indian runner whom Dick had sent west to the Thunder Hills, returned with the word that he had never been seen or heard of over there at all. They could only wait in suspense, praying that at least they might sometime know definitely what had happened.

Norrys, too, wanted to believe that Spaulding would surely return. He wanted to believe that, after the storms of the last three months, the spring was symbolic of all this trouble blown over. But he saw no way for that to be. Even if he should return now, *alone*, he would bring with him the heavy secret of what he had done north there in the Strong Woods.

He knew that Spaulding, for all his strength of purpose, was very human. The secret would weigh upon him during the long years to come. Deliberately Spaulding had assumed that load to shield others—those two there in the candle-glow. He had not called it sacrifice; he spoke of it as a thing which had to be done. But his voice when he had said, "Maybe I can make myself forget—I don't know!"—the hopelessness of his voice lingered with Norrys yet.

What Spaulding had deliberately taken upon himself—it seemed to



"It's for me!"

Norrys more than a mortal should be called upon to bear, more than merciful Providence would ask or would allow. During the last several weeks he had clung to that devout belief for comfort. His clear reason told him there was no possible way out for Spaulding. His faith, defying the sheer impossibility, told him there had to be!

NEARLY out of earshot, north of him in the woods, Norrys heard a faint scratching noise. It came nearer, grew more distinct, louder, till he made out the crackle of racquets on the snow crust, and the swish of komatik runners.

He straightened up, listening intently. The *komatik* was heading straight toward him, guided by the candlelight in Aurore's window. Presently a big black husky, unharnessed, trotted out of the dark shadows into the brilliant moonlight. Behind him came a team of dogs, whining in their eagerness to be home.

Lem Fullerton's dogs! Norrys shook off his daze and sprang forward, an inarticulate cry on his lips. But his fear was cut short. Out of the shadows strode a figure—Spaulding.

They shook hands in silence. Norrys asked no questions. Spaulding's coming back with Lem Fullerton's dogs—that told its own story. But Norrys was puzzled by the younger man's manner. Spaulding's gloom had dropped from him. The stern, hard lines of his face were smoothed out. His voice was grave but quietly cheerful when he spoke.



"I heard—met an Indian this afternoon—that Dick's here. Bring him out to me, won't you, Norrys? Don't tell Aurore I've come. Not yet—till I see Dick. Later I'll talk to you."

He was still there at the shadow's edge when Norrys returned with Dick. Watching the greeting between them, Norrys saw a little deeper than ever he had seen before into younger Fullerton's admiration for Spaulding; into the latter's strong brotherly regard for the corporal.

Dick did not notice that Spaulding was driving his father's dogs. As gently as he could, Spaulding broke the news to him:

How he had followed his half-breed trader three hundred miles northwest, overtaking him at last on the shores of a lake. How the trader, desperate to escape, started to run out upon the treacherous candle-ice of the lake, broke through, and so died. How, returning along the eastern spur of the Thunder Hills, Spaulding had found

Lem Fullerton's dog team and *komatik*. How, surmising an accident, he back-tracked the team to where an avalanche had cut a sharp swath down a hill-slope, burying the valley under a mass of rock and splintered timber—

Norrys tried not to listen to the lie. It tugged at him to see how implicitly Dick believed the whole impossible

After a while he saw Dick turn, and slowly go back into the trading post to tell Aurore. Spaulding stood watching for several minutes — watching the lighted window of her room for a glimpse of her. Presently he came over to Norrys.

"It will be a blow to them, of course," he said quietly. "But it's something they can forget, erase—especially since the three of us are going away—next month. New work, new surroundings, a new life—"

Norrys winced at the thought of them leaving.

"I had to explain about my having the dog team," Spaulding continued. "And it was better to end their suspense about him, than to have them worried, hoping, expecting him—for months—"

Norrys nodded.

"Dick took it very bravely, Norrys. He'd half-suspected it, and Aurore too—their father being gone so long. They're sensible. They'll accept it bravely enough after a time—"

"Yes," Norrys agreed huskily. "Death is a natural thing—to be accepted. Disgrace, dishonor, an ideal shattered; are not. What you mean to say, Spaulding—they have their father still. They'll always have him—because of what you did."

Spaulding did not answer directly.

MORE and more Norrys was puzzed by Spaulding's calmness, his quiet voice. But he restrained his questions. He knew that Spaulding, in his own time and way, would tell him the truth.

"There's another thing, Norrys—those furs. You've been wanting to build a little mission somewhere in your parish. They will build it. John Ear-to-the-Ground knows where the cache is. He'll take you there and help you bring them back. Perrault—Dick and Aurore surely will turn this post over to him, after his loyal years with them—Perrault will handle those furs. And he's too guileless to wonder much where they came from."

Norrys listened to the detailed instructions. His heart leaped when he pictured a mission, his very own, enabling him to do a hundred things hitherto impossible. A school, a tiny chapel, a printing press for those pamphlets he was translating into Cree—all that was some recompense for losing Aurore's friendship, for losing his intimate association with Spaulding.

Spaulding seemed to be waiting. He kept glancing anxiously, impatiently at the door of the trading station, as he talked.

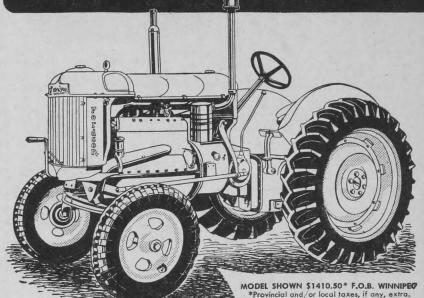
"And now, one last thing, Norrys—"
He spoke very softly and plucked at birch paper on the cordwood. "One last thing you're wanting to hear—what happened up there. Sometimes—this last week when I was coming home—I doubted my memory. Doubted what my own eyes had seen. After what you and I ran into, over east at Riviere Epinette, it seems too fitting, too just to be true. You'll see

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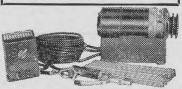
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in it a moral law, Divine retribution, at work. I see in it a scientific fact, inescapable as fate.'

He stopped, and glanced around him into the shadows, as though he wanted no man on earth save Norrys to hear his words.

"When I left you," he went on, "I headed up to that cache I mentioned. He'd gone from there two days before. I trailed him-ran him down. The end came in a blinding blizzard. For an hour or two before I found him, I noticed his tracks were weavingweaving this way and that like a drunken man's. It seemed he was hunting a place to camp. That's the only way I could explain it then. But instead, he was sick-desperately sick. I saw that, my first glance, when I walked out of the blizzard and met him face to face.

I couldn't do what I had intended to do-not to a man who staggered, who didn't even know me, who was delirious.

"So I stayed there nursing him, doing what I could. Three weeks! I thought he would live. But the cold, the exposure, his age-he had a relapse. I gave him burial in the Strong



"Watch it, Jake. I think you made the last one too deep."

Woods where he'd spent his life. You see, he took chances on an old vaccination, and-

Norrys started wildly.

"Chances - old vaccination? Good God, you don't mean-it can't be true -what he gave to others-back upon

Slowly Spaulding nodded. "Yes. The red death."

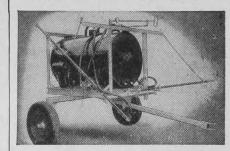
WHEN, a long half-hour afterward, the door of the trading station opened and Aurore came out alone, Norrys walked away into the shadows.

She came toward Spaulding hesitantly, as though doubting he was alive and back with her. The breeze whispering across the clearing molded her dress about her slender body, and the moonlight was upon her hair. In the softened, silvery flood she seemed a vision such as no man was worthy of -unless it was the man who went forward to meet her.

He went toward her courageously, without hesitation. In the center of the clearing, with a pair of wild swans trumpeting overhead, with the chastened, subdued roar of the river brought to them on the spring breeze, they met and stood a moment, looking at one another, before Spaulding bent down and slipped his arm around her, and their two figures merged into one.

THE END.

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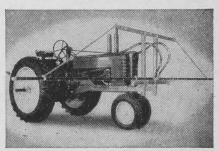
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Spike and the Wicked Wolves

Some people may think that a few points in this story have been stretched. If they do they are entitled to think what they like. I got it straight from the lips of Old Kamoose, who is the oldest brush-popping cowhand in the Peace, and the best storyteller

D. F. SYMINGTON

PIKE DREW was known all the way from Montana to the north end of the Peace River country as a man who could get himself into more trouble than any other ten men. He could get himself out of it, too, for he was sharper than a pocketful of razor blades.

There was one time, though, that Spike Drew got himself into a jam that looked too tough even for him, and that was when the wolves treed him on the Big Smoky River.

Spike had lost his saddle horse and he was walking through the muskeg to the town of Peace River, about fifty miles away, where the Smoky River joins the Peace.

He was right in the middle of a clearing about a hundred yards wide when he heard a sound that made the blood run cold in his veins-the yammer of a hunting pack of wolves as it ran onto his warm trail. A second later the pack burst out of the timber, spotted Spike, and made right for him, fast.

Spike was a rider by trade, but he ran pretty good that day. He lit out like a streak of greased lightning for the edge of the clearing. He had his eye on a big tamarack tree, which was the closest one to him. By the time he got near the tree the leader of the wolf pack was practically breathing down the back of his neck. Spike saw there wasn't a branch lower than fifteen feet from the ground, but he jumped, and he caught that branch, coming down! He climbed a-straddle the branch and watched the big pack fighting over the seat of his trousers, which the leader had gotten hold of just as Spike jumped. Then he sat back and waited for the pack to go

Well, Spike waited, and the wolves waited, looking up at him with their wicked green eyes and licking their chops. They waited all day, and by evening Spike was getting pretty tired of sitting in the tree, but there wasn't much he could do about it. At last Spike figured he'd-just about won the waiting game, because a couple of the wolves loped off into the timber, and Spike thought the whole pack would go soon.

As it turned out, he was mistaken. Those timber wolves were pretty smart. It wasn't more than a few minutes before the two wolves were back, and Spike started shaking like an aspen leaf when he saw what they brought with them. Those crafty wolves were carrying a big beaver!

They set the beaver down at the foot of the tree and he went to work. He cut two grooves around the tree, the way beavers do, and he chipped out the wood from between the grooves, and then he deepened the grooves and chipped more wood away, and all Spike could do was sit on his branch and watch.

Spike figured the beaver would fall the tree out into the clearing and that he himself would drop right into the mouths of those hungry wolves. Then he got to thinking. In all his life Spike had never seen a beaver fall a tree away from water. It was beaver instinct to drop their trees so the top of the tree was pointing to the nearest stream. In this case, the nearest stream was the Big Smoky, only a few hundred feet away through the

The big white hunter's moon had just risen when the beaver started to make his last cut round the tree. Spike sat on his branch and looked down at the glowing eyes and glinting white teeth of the pack, and he hoped pretty strong that the beaver would make the tree fall in the right direction, and not out into the clearing.

FINALLY the tree started shaking a little, and waving back and forth, and Spike knew it wouldn't be a minute before it fell. He climbed up the tree until he was squatting in the topmost boughs, and waited. He knew that the next minute would tell the

At last the tree started to topple over, and Spike breathed "Thank ye, little beaver," right from the bottom of his heart, because the tree was starting to fall toward the Big Smoky River, and not out into the clearing. The beaver had been true to his in-

As the tree fell the whole wolf pack moved to where the tip would come down, so they could get Spike Drew right when he hit the ground. But Spike never did hit the ground! As the tip of the tree went arcing down to the ground it passed pretty close to another big tamarack and Spike made a mighty leap, landing on one of the lower branches of the other tree. The whole pack let out a tremendous howl of rage, and Spike heaved a sigh of relief as he sat down on the branch. He knew he was safe, for the

time being, at least.

Well, the wolf pack made the beaver work all night, cutting trees out from under Spike Drew, but they couldn't teach the animal to fall his tree away from the Big Smoky and the other trees. Everytime a tree fell, Spike would jump to another one, and all the while he was getting closer to

At last he was perched in the branches of a tall pine right on the bank of the Smoky River, and he knew he was safe. The beaver made his last cut, and the tree fell into the river with Spike aboard. The Big Smoky flows right past the town of Peace River, and it flows fast. Spike just straddled the tree and rode right down to town, and he figured it was a good deal better than walking, for he was a riding man.

In the next issue of The Guide there will be another of these incredible tales out of the incredible Peace. If readers know of any more that can be added to this collection started by Mr. Symington, let the editors hear from you.



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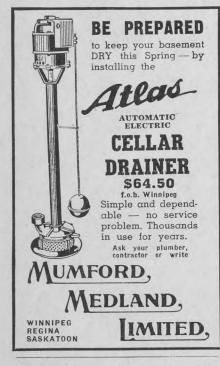
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Those Rubber Dollars

Businessmen in modern times have been scrupulously careful to preserve standards of measurement for everything but value

by R. D. COLQUETTE

T one time in French history the legal unit for measuring distance was the circumference of the king's belly. Evidently it varied from year to year and from king to king.

Henry I of England decreed that the ell, which answers to the modern yard, was the distance from the end of his nose to the end of his thumb. In 1225 A.D. it was solemnly enacted in England that the legal inch was to be the length of three barley corns, dry, taken from the middle of the ear and laid end to end. Two years later it was further enacted that "the English penny shall weigh 32 wheat corns in the midst of the ear."

In Germany the following instructions were once given for finding the length of the rood: "Stand at the door of a church on Sunday and bid 16 men to stop, tall ones and short ones as they appear to pass out when the service is finished; then make them put their right feet one behind the other and the length so obtained shall be the right and lawful rood to survey land with."

We smile at such crude standards of measurement. In these days of precision the legal metre is the length of a bar of an alloy of iridium and platinum, kept at zero centigrade in the archives in Paris. In Washington there is a similar bar kept in a subterranean vault at constant temperature. The reading is made through a telescope from the other side of the room lest the heat of a civil servant's body should expand the bar and throw the reading out a millionth of an inch or so. The imperial gallon contains ten pounds of distilled water and equals 277.274 cubic inches. The standard pound avoirdupois is a platinum cylinder kept in London. It is lifted with an ivory fork. If it were touched by fingers it would be soiled slightly and its weight increased.

And just to see that everyone in Canada toes the line the government has a Weights and Measures branch with a flock of inspectors at intervals across the country to make sure that yardsticks are 36 inches long, that the gallon is correct to the third decimal place and that anything weighed in the balance is not found wanting.

WHEN it comes to measuring values, however, we are not so pernickety. Just now the dollar is in high repute but as a measure of value it is as accommodating as a rubber band and as collapsible as a concertina. With wheat, for example, this is how it works: In October, 1914, it measured the value of 32 quarts of No. 1 Northern on the Winnipeg market. In 1919 it measured the value of 14 quarts, in 1926 of 26 quarts and in December, 1932, of 82 quarts. Just now wheat earmarked for sale to Britain is running at 15½ quarts to the dollar.

Wheat prices, to be sure, are very excitable except under government control. Prices as a whole are more phlegmatic but at that a graph showing the price behavior of all commodities since 1914, to go no further back, looks like a cross section of the Rocky Mountains during the same

period. Since 1938 wholesale prices of all commodities have jumped an average of 100 per cent while the cost of living has climbed 61 per cent. In each case roughly two-thirds of the upward trek has been made since the hot war cooled off.

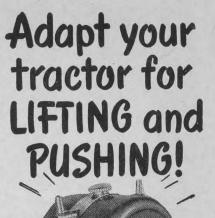
In an inflationary spree, like the present one, the owners of bonds, bank deposits, life insurance policies, mortgages, annuities and the like are the victims of a squeeze play in which these assets shrink until they are as wrinkled as a prune. There is nothing petty about it. It may not be grand and glorious larceny, not wholesale repudiation, but the effect is the same. If the amount by which the real value of these securities has shrunk in the last ten years were applied to the national debt, it would easily reduce it to its prewar proportions.

it to its prewar proportions. As touching the national debt, Mr. Abbott claims that, owing to the buoyancy of the revenues, he has been able to reduce it by a couple of billions or so. Mr. Abbott is too modest. It is true that Victory Bonds, which represent over 12 billions of the debt, are selling above par. But sell one and take the cash to the village emporium or the city departmental store. There, and not at the bank, is where you will find what a Victory Bond is worth. It will buy only about three-quarters as much as when you bought the bond. Its real value has shrunk like a suit of cheap underwear in the wash and the funded national debt of over 15 billions has shrunk accordingly. Mr. Abbott's savings amount to at least six billions. For these shrivelled dollars are easier to collect. A finance minister would have consumed a lot of aspirins trying to collect two and a half billions of them annually during the groaning thirties or even in the roaring twenties. Provincial and municipal bonds, some five billion dollars' worth of them, and the vast sum of industrial bonds, have suffered the same desiccation.

Life insurance is one of the most efficiently run and thoroughly supervised businesses in the country. The insurance in force approximates the total issue of Victory Bonds. The contract with the policy holders is to pay so many dollars, under specified conditions, usually to the chief mourners. Their grief is not assuaged by the reflection that the dollars are 50-cent pieces compared with the currency the dear departed shelled out during the 30 or 40 years in which he was paying his premiums.

I know a man who had a mortgage on his neighbor's farm. The interest rate was six per cent. Came wartime prices and he got his money back. He put it into Victory bonds at three per cent. That cut his income from the money in half. Then came more inflation which reduced the purchasing power of his income by 35 per cent. His real income from that money is less than one-third of what it was before the country became so prosperous.

It is the old people, who remember when nobody got up rested and have lived till nobody goes to bed tired, who have been sold furthest down the river in this shrivelled dollar business.



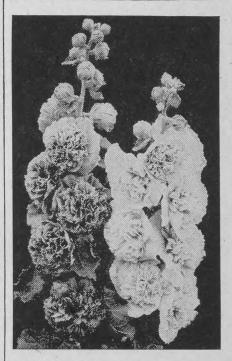


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A man reaching retiring age in the decade centering around 1950 was born either 20 years too soon or too late. I know one of them who recently retired. But for Schicklgruber he would have had \$30,000 saved up. Income taxes took \$8,000. Special war taxes probably took another \$2,000. The purchasing power of what is left has been reduced by, let us be conservative and say one-third. This all means that more than half of his life savings has been swept away. All that penicillin and the sulfas can do is to prolong his misery. The luckiest man is the one who retires at 65 and dies at 66. He doesn't have to worry about not having a hobby. Anyway, why should a man prolong his life by having a hobby when pretty soon he'll have nothing but the hobby

The case of the man with a monthly annuity cheque coming in isn't so bad. But as he meanders down to the bank to cash his monthly insult he may be pardoned for musing mournfully on the authoritative dollars he paid into his annuity fund in days gone by. He has a feeling that the sooner a depression hits, the harder it hits and the longer it lasts the better off he will be. However, with waxed and polished price floors, iron clad and copper rivetted wage contracts and the habit forming practice of charging high professional fees, the hope of relief from that source rolls out pretty thin.

There is, of course, a brighter side. Its highlight is that the vast majority of those who have been exploited haven't yet become fully conscious of what has happened to them.

Co-op Selects Gilts Records reveal breeding quality

THE Wisconsin Swine Selection Co-operative keeps records on more than 20,000 pigs for 300 members in more than 40 counties. On the basis of these records farmers will select the gilts that should be kept for the breeding herd.

The co-operative was started in 1945. At that time a number of farmers approached the Wisconsin State College of Agriculture to try and get help in selecting the best gilts. The problem was that all the pigs were run together for feeding and it was impossible to tell which gilt came from which litter, and which made the most efficient gains.

The result was the organization of the co-operative. Life membership costs two dollars, with a further charge of 75 cents a litter for those entered for records. If enough litters are entered this charge goes down to 50 cents. In return for this each farmer receives an index which indicates the over-all quality of each pig.

This index is based on a number of factors. Each pig gets one point for every pig in the litter of which it is a member. It gets two points for every litter mate raised to five months. It gets one point for every 100 pounds that the litter weighs at five months. It gets seven-tenths of a point for every pound that it weighs over 75 pounds at five months. In 1948 the average index was 90.

Indexes are mailed to the farmer and are kept confidential. A farmer gets a report on his own pigs and on the average for the State. With this information he can judge which of his gilts might give him the best pigs the following year.

farm Service facts

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HOW TO CHOOSE AND USE THE RIGHT TRACTOR FUEL

Selection of the right tractor fuel is mighty important . . . two ways. It can make a big difference in getting maximum power from your tractor, and in economy of operation. When we stop to consider that the total cost of fuels and lubricants used in the normal lifetime of a tractor, will we can readily see the importance of choosing fuels wisely . . . and adjusting the tractor properly for best use.

Fuels Differ in Boiling Point

A fuel produces power only as it is A fuel produces power only as it is vaporized. Any petroleum fuel is made by blending some of the light fractions (low boiling point) with some of the heavy fractions (high boiling point). A good fuel is one that contains the right balance of these various fractions. Complete vaporization is necessary for maximum power,

maximum power, and to avoid un-burned fuel being forced down into the crank case, diluting the oil. Therefore, the operator must be sure that the tractor is kept hot enough to vaporize the heavy fractions.

Engines Differ in Compression Ratio

.11

The compression ratio of a tractor is the main point in determining the type of fuel to use. Compression ratio, in simple terms, is the extent to which the air-fuel mixture in the cylinder is compressed by the piston during the compression stroke. That during the compression stroke. That is, a 5-to-1 ratio means that the mix is compressed into one-fifth of its original space. Generally speaking, the higher the compression ratio, the greater is the power of the engine, provided the proper type of fuel is used.

For High Compression Tractors

High compression tractors are those with compression ratios in the range of 5.5-to-1 to 6.5-to-1. In recent years, the trend has been more and more to this type of tractor, but not with as high compression as modern automobile engines. In 1949, the average compression ratio of automobile engines was 6.9-to-1. Some were higher.

High compression engines require a gasoline with high octane rating, in order to operate without knocking or pinging. When ping-ing occurs, it reduces the power and also may subject the engine to

Most manufacturers of high Most manufacturers of high compression tractors recommend the use of regular gasoline . . . and it pays to follow their recommendations. Regular gasoline (such as Esso) has a sufficiently high octane rating to prevent pinging, and seldom (if ever) does it pay to use a higher-octane, higher-priced premium gasoline in a farm tractor. The premium gasolines are made for use in the highest-compression

automobile engines which, as noted above, have a considerably higher ratio than tractors. Regular gasoline will develop as much power as premium, as long as there is no ping. High compression tractors run best with "cold" type spark

For Medium Compression **Tractors**

In the case of medium compression tractors . . . those with ratios of 5.5-to-1 and lower . . . there is more room for trying out and comparing different fuels. Generally, a medium compression tractor works best with medium-octane gasoline, such as Imperial Acto. But if it has a hot-type manifold, it may use distillate very satisfactorily. Or, if the compression ratio is in the "upper medium" range...

almost high enough to be classed as high compression... and the tractor is under heavy lead under heavy load ... then you may find that regular gasoline will give you the best allround perform-

ance.

In using distillate, it is important to use "hot" type spark plugs.

In using gasoline, either medium-octane or regular, the "cold" type spark plug will improve the performance. If the tractor is equipped with a "hot" and "cold" adjustment on the manifold, it is equally important to turn it to the "hot" position when using distillate, and to the "cold" position when using gasoline.

For Low Compression Tractors

Tractors with compression ratios of approximately 4.75-to-1 or lower, are classified as low compression tractors. Most of the early models were of this type. Low compression tractors are designed to burn distillate... such as Imperial Tractor Distillate. They are built with a "hot" type manifold to provide the necessary heat to vaporize distillate... which carries a higher proportion of heavy fractions than gasoline. tion of heavy fractions than gasoline. They can be operated successfully, and most economically, on this heavier fuel, provided the water temperature in the cooling system is maintained at approximately 200 degrees. In cool weather, it is usually necessary to use a radiator is maintained at approximately 200 degrees. In cool weather, it is usually necessary to use a radiator shutter or screen to hold the water temperature at this level. It is also important to use "hot" type plugs.

A low compression tractor must be started on gasoline . . . and one of the secrets of satisfaction is to warm up the engine thoroughly, before switching to distillate.

Diesels are Different

"different Diesel tractors are a breed" that require a highly refined fuel of their own. No space to discuss diesels here, except to say that it is a mistake to try to operate them on anything except special diesel fuel . . . also the fuel must be kept absolutely clean. It's a Bargain!

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- C.G. -



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The Harrier Of The Marshes

A bird of prey whose usefulness far exceeds his occasional misdeeds

by H. H. PITTMAN

ARSH hawks are found in all suitable areas from coast to coast throughout Canada and the United States. They are the slender, long-winged hawks of the open places, generally seen at low elevations slowly patrolling the marshes, moorland and fields. They may often be seen at a height of ten or twelve feet methodically circling the prairie sloughs and then, after rising far enough to surmount any intervening



The female of the species.

trees and bushes, descending again to patrol the next piece of low-lying ground. The slow movements of their long wings (which may measure four feet or more from tip to tip) often give an observer a deceptive impression of leisureliness.

Harriers, the group to which marsh hawks belong, are remarkable for the difference in plumage of the sexes which is so marked in one case that males and females were once popularly believed to belong to different species. Our marsh hawks are no exception for although the females are definitely brown birds, their partners are a striking bluish-grey color. Both, however, can easily be recognized, especially during flight, by the white patch at the base of tail and, at close quarters, by the owl-like feathered facial disks. Because of these disks early observers apparently considered the harriers to be closely allied to the owls, possibly even the connecting link between the diurnal and nocturnal birds of prey.

Although structurally true hawks the harriers show a curious resemblance to the owls in their method of procuring food for they often hunt by ear, locating their prey first by sound and then using their eyes. Owls depend largely upon their keen sense of hearing and like to sit quietly or fly noiselessly in the dusk, listening for sounds suggesting the presence of small animals or birds. Woe betide the sparrow that snores or the mouse that talks in his sleep! Mice and voles, being gnawing animals, are unable to feed silently and cannot always move soundlessly through the vegetation, especially if it is dry. Hearing these sounds owls approach quietly until they can see their prey and then quickly seize it. Marsh hawks frequently hunt in a very similar way.

F an observer wishes to prove the truth of this statement he should conceal himself beside a marsh or large slough on a calm, warm day. In windy

weather marsh hawks fly high, apparently depending upon sight alone, but when the wind drops and they can resume their patient patrolling at a lower level it can readily be seen that they are listening as well as watching. I have often seen them stop and hover or make a short circle to pass a second time over a spot where they had heard a suggestive sound but had been unable to see a victim. In this connection I may say that it is very probable small rodents use their voices more than we realize, for the human ear often misses very highpitched notes that may be quite audible to avian ears.

P. A. Taverner's Birds of Western Canada reports studies of the contents of stomachs of a number of marsh hawks. Of 144 food items observed only 41 were of game more useful left alive. Only three were domestic

On the western prairie marsh hawks seem to live chiefly upon mice, voles, ground-squirrels and frogs, adding small snakes and grasshoppers when circumstances permit. During the time I had a nest under observation the principal food given to the newly hatched chicks consisted of the entrails of striped ground squirrels caught in an adjoining wheat field. Throughout most of their range these handsome hawks are undoubtedly beneficial.

Of course marsh hawks sometimes take sparrows, meadowlarks and other small birds and may occasionally kill game chicks or be troublesome near a poultry yard but in the parts of Manitoba. Saskatchewan and Alberta where I was able to watch them very little damage occurred. Whatever harm a few individuals may have done was insignificant when compared with the good done by destroying pests.

Probably few people realize the economic value of our predatory birds or stop to think that an occasional chicken, duck or grouse is small pay-



Male marsh hawk at the nest.

ment for the ceaseless patrol of our fields and woods maintained day and night by hawks and owls. These predators are an occasional threat to song birds and to game birds. They are a constant threat to harmful rodents, such as gophers and mice, and a nest of useful hawks is often worth many dollars a year on a farm.

One of the best of the hunters is the harrier known almost everywhere as the "marsh hawk."

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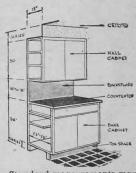
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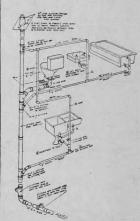
Extra blades are always and hand and don't get lost.



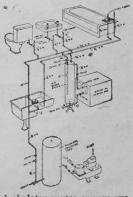
er" should be ad suit each cow's height.



Standard measurements may be varied slightly to suit in-dividual needs.



Where additional fixtures are used a second stack may be added.





Larger School Areas

Continued from page 13

cupboard space, hot lunches, ample playground equipment, neat fences, solid, well-built stables, and library books supplied over and above the minimum required.

"In too many one-room schools, however, the above facilities were lacking. In too many school districts there was indifference to and lack of interest in school property. There were too many outside toilets in poor condition and infrequently cleaned out, windows loose and admitting the icy blasts of winter, poor heating facilities, flags and flagpoles in poor condition, only the minimum amount spent on libraries, inadequate washing and drinking facilities, poor floors, poor lighting, poor blackboards, poor maps, poor globes, no classroom thermometers, poor fences and brokendown stables and coal and fuel sheds. Many buildings in this latter class need replacement."

THESE conditions reflect no credit on either the ratepayers or the trustees of these school districts. What is illustrated in the first paragraph seems to indicate that it is not financial ability that is responsible for the difference between the two groups of schools, but lack of appreciation of the place of education in the modern world, coupled with lack of regard for the welfare of rural children and lack of pride in community. Nothing is said about the salaries paid to teachers, but almost certainly it is in districts like these that trustees budget for the minimum amounts the law permits them to pay teachers.

What is education worth, anyway? The answer depends on the scale of values one uses for this calculation. If one accepts the view presented in the foreword to the report of the Special Select Committee on Education of the Manitoba Legislative Assembly, its worth is incalculable. We read: "In this our land, we are dedicated to the principle that it is possible to found an enduring civilization upon certain elemental qualities common to all mankind. The development of those qualities is the supreme function of education."

Brave words, you may say. Yes, and no uneducated person could have written them. One of the functions of education in present-day organized society, where interdependence is the rule, is to enable each of us to put into words, clearly and plainly, our thoughts on matters that are of mutual concern to others and ourselves. However, there are other, if more superficial ways of measuring values, and these appeal to more people. One way is by earning power, and here we have some cold facts to go by.

Some months ago the Federal Minister of Labor, in a message to the youth of Canada, stated that there was a definite relationship between the number of years spent in school and earnings. A study of figures taken from the 1941 census revealed that during their most productive years, workers with five to eight years of schooling earned an average of 42 per cent more than those with only one to four years in school. Similarly, those who had completed nine to twelve years' schooling had average earnings 43 per cent higher than those

in the five-to-eight year group. But the most striking revelation was contained in the figures for those who had completed thirteen or more years of schooling. This group recorded average earnings almost 50 per cent higher than those in the nine-to-twelve year group.

Figures from the same census also provide this information:

For 80 per cent of all Manitoba farm operators, schooling had lasted for eight years or less (Saskatchewan 78 per cent, Alberta 74 per cent); and for 24 per cent of Manitoba farmers, schooling had lasted four years or less (Saskatchewan 19 per cent, Alberta 17 per cent). Average schooling for all farmers was under seven years. Could these figures and those quoted by the minister of labor, taken together, mean that part of the reason for the generally lower average income of farmers is lack of education? Would farm organizations be stronger and more effective if their members were better educated? Such facts as we have seem to point in that direction.

IF we can assume that only a small minority do not want more and better education for their children, how are we to go about getting better education for rural areas? The focal point, of course, is the children; and they are the helpless recipients of what we, as adults and taxpayers, are willing and able to provide. For a solution of the problem, a better focal point is the teacher. About half of the total cost of education in the prairie provinces arises in teachers' salaries. The other half is incurred so that the teacher may apply his or her-ability and training.

If this is sound reasoning, it means, then, that we must obtain a good, well-qualified teacher and provide the necessary equipment. Both teacher and children are entitled to comfortable, healthful surroundings. Education is a growing and developing, rather than a cramming, process. Minds are not fed as stomachs are. The teacher, therefore, is an "influence" as well as a medium for the imparting of knowledge. If she is a good teacher, she will not willingly work cheaply longer than is required for her to qualify for a better school; nor will she continue to work without the equipment necessary to do justice to the courses she is required by law to teach. When teachers change schools, unless for a personal reason, there is usually something wrong with the school or the salary.

FOR many years this problem of rural education has been with us, and with eastern Canada and the United States as well. Years ago, the consolidated school movement was heralded as the answer to the rural educator's prayer. There are many of these schools still in existence and doing an excellent job. In the late twenties, or thereabout, the idea of the "larger school unit" was coldshouldered, as it had been everywhere at first, by the provincial school trustees' association of Alberta, when it was put forward by the Minister of Education in the U.F.A. government. Slowly, however, the idea prevailed. Two units were successfully operated in Alberta prior to 1935. After the provincial election of that year, the new premier, Honorable Wm. Aber-

hart, who was also minister of education, introduced legislation enabling the government to centralize school administration into what are now called school "divisions." Of these, 57 now exist, each, for the most part, containing from 60 to 80 school districts. Of approximately 4,000 school districts in the province, all but 312 are in the divisions. These exceptions include all the cities, some of the towns, about a quarter of the villages, a score of consolidated school areas, some separate school districts, 34 rural schools in the national parks, and a few newly-organized school districts.

In 1944, the Saskatchewan Legislature passed "The Larger School Unit Act," the aim of which was "to secure equality of educational opportunity for pupils in rural schools." Larger units had been advocated in the province from time to time since 1915. The experience of Alberta and other provinces had indicated, however, that the larger school unit could be made the means of leveling off the inequalities in size, financial resources and tax rates, of all school districts within a unit. The province was divided into 60 larger unit areas, and to date, 48 larger school units have been established with gratifying results.

In Manitoba, a municipal school unit was formed in 1919 in Miniota, which is still operating successfully, with eleven teachers in four central schools. The municipal school unit, however, did not find favor elsewhere, and no other such unit has been established in the province. In 1945 the Special Select Committee on Education of the Manitoba Legislature accepted the general principle of the larger unit of school administration, but failed to carry its conviction further than to recommend the setting up of two experimental units of this nature, after a majority vote of the ratepayers had been secured in each instance. This limited view was taken despite the fact that of the various provinces and states that had adopted the larger-unit idea, "not one has ever voted itself back into the former system of local units." One larger unit has resulted from this recommendation, that of Dauphin-Ochre, which began successful operation in 1946, with what amounts to 47 elementary schools, two rural high schools, one junior high school, and a composite high school in the town of Dauphin.

OTHER provinces in Canada have been moving in the direction of larger school units. Nova Scotia, for example, had adopted the larger school unit in 19 out of 24 municipalities, by 1944-45. The county unit was adopted in New Brunswick, and ten of the fifteen counties were administering all schools in this way by January 1945. In Quebec, in 1944, an act was passed providing for the incorporation of Protestant, centralized school boards. Ontario had 187 township school boards, by 1944. In May 1946 British Columbia established 74 larger municipal school districts, to replace 650 municipal and rural school districts. In the United States by 1944, township or county units had been adopted in 22 states. A 1948 publication of the South Dakota State College, at Brookings, had this to say on the subject:

"A comprehensive movement towards the reorganization of rural districts into fewer, but larger, units has been under way throughout the United States for the last 15 to 20 years. The Middle West is one of the last regions of the country to undertake such a program. The states of Michigan, Indiana, Illinois, Wisconsin, Iowa, Minnesota, North Dakota, Nebraska and Kansas are all sponsoring reorganization campaigns. Most of these states have already had state surveys made and have submitted recommendations for the approval of their respective legislatures. In most instances they have some plan of action under way, frequently on a county basis."

Despite the growth of the larger school-area idea in Canada, the United States, and other countries where the same process of change has been going on, opposition has developed. Some taxpayers fear higher costs. Some parents fear that schools with very small enrolments may be closed and the children forced to attend schools farther from home. Trustees in many cases are inclined to fear the loss of local autonomy.

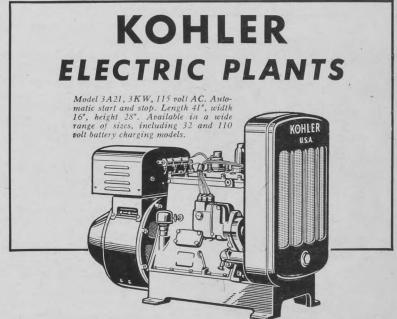
Mostly the opposition is not very well founded and not very well informed. All the evidence so far available points to the conclusion that where schools are closed under a larger area of administration, they are usually, if not always, closed by a vote of the ratepayers and parents immediately concerned. Similarly, where the authority for the engaging of teachers is removed from the local trustees and given to the board of a larger unit, it is replaced by other important responsibilities which only the local officers can fulfil. At the same time, the local district generally retains the right to offer a panel of satisfactory teachers from whom the area board can make a selection. As to cost, the experience has been that, on the whole, it costs a little more, but the school district also receives a great deal more in the way of educational services.

Indeed, administrative savings are quite substantial, and these, together with the small extra total cost, enable the larger area to provide a type of education far superior to that which the small district alone can offer. It is a common experience, both in Saskatchewan and in Alberta, that many individuals strongly opposed at first to the larger area, have become its strongest supporters after a year or two. No other system ever devised has enabled rural people to build, care for and equip so many schools, or has attracted such a high percentage of good teachers, as the larger unit administration. If it is true, as the Committee of the Manitoba Legislature found it to be true, that no area which has voted itself into a larger unit has ever voted itself back into local units, there must be something in the idea that is worth careful and hopeful study of its promises by all rural folk.



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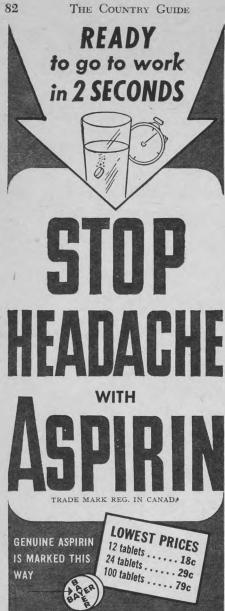
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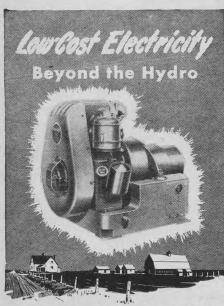
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CITY......PROVINCE.....

Farming In Iceland

Farming on this north Atlantic island is not an easy way of making a living

by ALAN MORAY WILLIAMS

HILE Canada was sweltering in heat last summer, Iceland, living up to the "depressing" reputation the BBC has given its climate, was getting a nasty overdose of rain. I spent two weeks helping with the haymaking on an Icelandic farm. On eight out of the first ten days I was there it rained persistently, almost completely ruining the farmer's late-summer hay crop.

The farmer, however, showed little surprise at this. He was used to such disappointments. In a land whose mountainous nature makes the slightest change of wind mean a change of weather, you cannot count on any-

There are some 6,000 farms in Iceland, situated, at long distances from each other, in the grassy valleys and plains that run along the coasts. The one I visited was in the southeast corner of the country, a district called Hornafjordur. It is a part of Iceland unfamiliar to foreigners, being cut off from the rest of the country by Europe's largest glacier, the 5,000 square miles Vatna Jokull.

One of the Iceland Airways Douglas planes, which now fly on 22 routes over Iceland and thus solve most of the island's transport problems, took me to Hofn, and from there the local clergyman (a gentleman with a quite prodigious knowledge of English literature) drove me to the farm in his

To reach it, a two-storey concrete building standing at the foot of a picturesque mountain, we had to ford several swift-flowing glacier rivers, water coming over the level of the running boards and a tongue of the glacier itself, a sinister grey-white mass, was only a short distance from the farm's front door. The nearest other farm was three miles away.

When we arrived the sun was shining and haymaking was busily in progress. Practically no cereals can be grown in Iceland's climate, so hav to feed his livestock in winter is the Icelandic farmer's predominant concern. He tends his tuns (home-fields) with elaborate care and gets at least two crops from them: one at the end of July and one at the end of August. This August, however, there had been so much rain that my Hornafjordur farmer had not been able to begin cutting his second crop till the 28th.

The second day, Saturday, was fine, too, and we worked till late in the evening, turning the long rows of hay with our rakes in vigorous, rhythmical sweeps. The whole family took part, as did several school children from Reykjavik, sent (as is the custom in Iceland) to spend their holidays on the land. Six-year-old Jon, the farmer's eldest son, drove a tractor with great pride and astonishing accuracy.

On Sunday, however, it clouded over, and from then until the following Friday there was an unpleasant drizzle which seldom left off, and made haymaking impossible.

At the end of the week it cleared and we managed to get the hay in, working one day until after midnight. But by that time, of course, most of it was spoilt. The farmer hoped to make it still acceptable to his stock by adding herring meal to it, but this, besides costing 2/- a pound, might be difficult to obtain, as a consequence of the bad herring seasons lately.

Iceland's farmers have to buy expensive machinery to drain and level their land, which for some reason is normally covered with little molehilllike tussocks and the wages paid to farm hands are astonishingly high; 'yet they seem to take things more easy than ours do. Maybe the climate forces them to. They work strenuously for short periods, but start later in the day than British farmers and have longer periods of inactivity. At Hornafjordur we seldom began work before 9, and had frequent intervals for refreshments (coffee and sandwiches) throughout the day. One day when the hay was too wet to gather we went trout-fishing (with nets) in the nearby rivers, bringing back our catch to be cooked for supper; on another we all went off to the mountains and picked bilberries which the farmer's wife would make into wine.

A LTHOUGH the farm was a pros-perous one by local standards (300 sheep, 18 cows and five horses, and several acres of potatoes and turnips), the family lived very simply. Boiled fish and potatoes, with melted mutton fat, followed by skyr (curdled milk) was the staple meal. Yet power tapped from a small waterfall behind the house provided electric light and even an electric cooking stove.

Like most modern Icelandic farming families they had a truck and a jeep; yet they had little touch with the outside world. The postman came once a week-on horseback. Newspapers, when they arrived, were always several weeks old, but were eagerly read all the same.

The men took a lively interest in politics, and discussed the coming elections most of the time while they worked.

They were members of the Independent (Conservative) party, and unlike most Icelandic farm peoplewere opposed to their country's cooperative societies, which they said took too big a rake-off when they sold their products. As an example, when they killed a cow, they receive ten kronur a kilo for the meat, but in Reykjavik the wholesale price would be 18 kronur a kilo. In consequence they were not going to give their votes to the Progressive (or "Farmers" Party") which, as it eventually turned out, polled 17 of the parliament's 52 seats to the Conservatives' 19.

A particularly charming member of the household was the farmer's wife. She did more work, I am sure, than any of the men. When she was not looking after her three small children, milking, cooking, washing-up and performing numerous other chores, she used to pick up a rake and come and turn the hay as deftly as anyone else.

She was one of the happiest people I met in Iceland. Indeed, despite the weather's vagaries. the whole family was a very happy one.

One reason for this was that they had no rents or tithes to worry about. Seventy-five per cent of Icelanders

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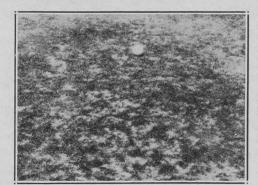
own the land they cultivate. Another reason, perhaps, is that once their sheep have been rounded up at the end of September and shut in their winter sheds, there is comparatively little work to do until the following May. In winter Iceland has only six hours' daylight. In the long hours of darkness the farmers and their families

can afford to sit back and relax a little.

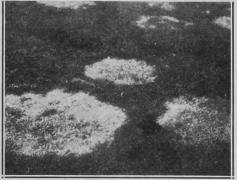
They read extensively, and in consequence are often among the most well-read members of the community. Many an Icelandic Robert Burns has sprung from these lonely mountain homes, though none, I think, of equal chature

GRASS DISEASES

Perhaps you have been dismayed by the spring appearance of dead patches on a well-kept lawn



Dollar Spot.



Brown Patch.

HE pictures on this page illustrate the commonest diseases that invade grass stands in Canada. They are most frequently seen on lawns. It is believed that none of these diseases affect large fields of grass, although there is no certain reason why they should not. It may be that the constant moisture provided for lawns keeps alive the organisms responsible for grass disease, whereas dry fields do not provide such a favorable environment. Golf courses provide the most favorable lodgement, and the results of an attack which is not immediately tackled can be quite damaging to greens.

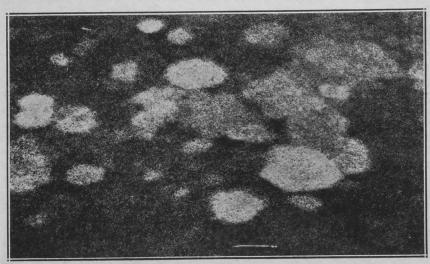
The commonest of these diseases in western Canada is Snow Mould. It develops in circular patches from a few inches to a couple of feet in diameter. The patches often run together to cover large areas. They are dirty white when they first develop, and may have a pinkish cast. Snow Mould thrives in temperatures just above freezing, in the saturated atmosphere near melting snow, or where snow covers unfrozen ground. It is often worse on lawns which have been liberally manured with the very

best decayed horse manure—normally the finest application for a lawn. In western Canada it appears just after the snow has melted, but the spots usually grow out again later in the summer. It may or may not appear in another year, and if it does the spots may not be in the same locations.

Brown Patch is caused by an organism known as Rhizoctonia solani. It is most likely to appear in hot, rainy, or humid weather. It appears suddenly as discolored areas ranging from small spots to patches several feet in diameter, with a dark ring or "smokescreen" around the border where the disease is still active and perhaps spreading.

Dollar Spot appears as bleached spots of dead grass. The spots are clearly defined and seldom larger than a silver dollar, but they may become numerous enough to destroy large areas of turf. Dollar Spot may occur overnight and thrives under the same conditions as Brown Patchbut can do extensive damage both earlier and later in the season.

Before the coming of organic fungicides the standard remedy, which is still fairly reliable, is mercuric chloride sprayed on as a solution, using six ounces of this extremely poisonous salt to six gallons of water. On golf courses, where adequate control is a matter of great importance, the organic poisons are now preferred. Brown Patch and Snow Mould may both be treated by Tersan. A compound recommended as a specific for Dollar Spot is DuPont F-531.



Snow Mould.



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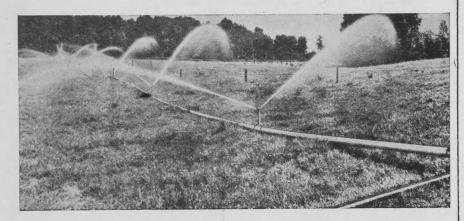




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Immigrant Farm Crops

A brief outline of what North American agriculture owes to the soil and the farmers of other countries

THE agriculture of North America has developed from the experience of the earliest European immigrants, coupled with certain crops and practices adapted from the Indians. The variety of crops which can be grown in Canada is not as large as that in the United States, because of our more northerly location. Climate prohibits the production in Canada of certain tropical and semi-tropical crops such as citrus fruits, cotton and rice, which are readily grown in the southern states.

A recent examination by the United States Department of Agriculture, of the countless contributions made by other countries to the agriculture of the United States, leads to the conclusion that the blend of the world's agriculture, achieved by the American farmer, has made the American nation probably the best fed in the world and has enabled the United States to develop what is described as an "\$125 billion agricultural industry."

It is stated that "every major crop grown in the United States today is an immigrant." Not only did the earliest cost the United States about \$50,000 to send these men on a two-year expedition. Had no other plant ever been brought to the United States, soybeans alone would have repaid many times the total cost of all plant-introduction work.

Another important plant is alfalfa, which is a famous immigrant from Asia, which arrived in two different ways at about the same time. Wendelin Grimm, a German immigrant, brought some alfalfa seed from his homeland and planted it in Minnesota. It was in this way that the United States secured its first winterhardy variety. Easterners going to California by way of Cape Horn during the gold rush, also got alfalfa seed in Chile, where it had first been secured from Spain. It was found suitable as a forage crop and quickly became popular. Within 50 years alfalfa was growing on 12 million acres of farmland, but was beginning to suffer from bacterial wilt. Plant explorers began to search elsewhere for resistant strains-in western China, northern India, north-eastern Iran



World contributions to North American agriculture. Map shows approximate centers of origin of some crops grown in the United States.

settlers bring many plants from other countries, but during the three hundred years since the establishment of the New England Colonies, plant explorers, ship captains, missionaries and others have gathered, from all over the world, a very wide variety of plants for trial on this continent. We are told that since 1898, when plant introduction was first established as a distinct unit of the United States Government, 185,000 collections have been received and numbered. Of these about 80 per cent represent the crops now familiar on American farms, and many of the others are still in the testing stage. Three of the most important are soybeans, alfalfa and lespedeza.

Soybeans, for example, represent an industry valued today at more than a billion dollars a year. Grown principally in the corn belt, they are used as food in margarine, shortening and flour, and also in such products as plastics, silks, paints and synthetic rubber. Most of the types of soybeans imported about 20 years ago were brought in by two American explorers of the Department of Agriculture. It

and Turkestan. Several discoveries were made and these, together with the efforts of plant scientists, enabled the well-known Ranger variety to be evolved, which is resistant to cold and wilt. In the mid-thirties another kind of alfalfa was secured, from northern Turkey, which sends up shoots from underground rhizomes and enables a single plant to spread over an area of several square feet.

Lespedeza also came from Asia and has become very important to farmers in the southern Mississippi Valley where, 30 years after its introduction, it yields an annual income of \$120 million. The common type of annual lespedeza is credited with having revolutionized agriculture over an area of 20 million acres. The Korean lespedeza was introduced by plant explorers from a half-ounce package of seed from Korea, and there are now said to be about 40 million acres in the United States of this species, which has become popular owing to its adaptability and hardiness.

The earliest settlers in North America brought wheat, rye, barley, oats and buckwheat. Their principal native

crop was corn, which they got from the Indians. They also introduced all of our present-day livestock, except turkeys. Ladino clover came from Italy; strawberry clover from France; the Washington navel orange from Brazil, and a writer in Foreign Agriculture tells us that the ancestors of most of the new crown-rust-resistant oat varieties can be traced to introductions made by the U.S. Department of Agriculture from South America and Australia. Fruits of European origin include the apple, pear, peach and cherry. The white potato came from South America.

Today there is a vast exchange of plant specimens between different countries. New species, new varieties, and new strains of varieties are being exchanged between plant breeders who test them in their own countries for adaptability as they are, or for use in their plant breeding work in order to introduce some valuable character into a combination of other and native types. What is true of edible crops is also true of ornamentals—trees, shrubs and flowers. Hundreds of the ornamental plants now growing in North America and obtainable through nurseries, were first introduced to this country from other countries and have been found adaptable to conditions in some parts of this continent.

These many plant introductions have helped to extend the scope of North American agriculture. They have helped to develop agriculture more extensively and intensively; and no doubt this progress will continue throughout the years to come, until we have exhausted the possibilities of plant improvement through the importation of foreign plants.

KINKY

A story of affection for a family dog

HE came to us a scared little white and brown pup, thin and dejected. We opened the crate with a sense of disappointment. This was the clinker collie dog we'd sent for, our new cattle dog. We looked him over and said little. Then the son said "He's got a nice head though," and we agreed. We were glad he had something!

We brought him to the house and fed him. Then he took himself to a corner of the kitchen from where he watched us with wistful eyes, and at every kind word we gave him would thump his tail on the floor. We can still hear that thump, though it's now a memory.

Well, we christened him "Clink," which mother immediately modified to "Kinky" and Kinky he was. We treat our dogs something like persons. They are one of us. In no time at all Kinky grew and flourished, and from the scared little pup became a keen cattle and watch dog.

He'd fetch the cows, sorting out the milk-cows. He'd watch every newcomer to the house, thrusting himself ahead as they crossed the threshold, and stretch himself out between them and us. He'd watch and train the pigs in their pen, so that a low board was all that was necessary to keep them in. They feared his sharp nips so.

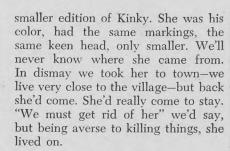
Kinky was a one-family dog. No overtures from the outside world would move him. No petting from a stranger drew any response.

He was the only one of his kind in our community. All the other farm dogs were brown or black, none white like Kinky.

Every once in a while Kinky would disappear for two or three days, on

some secret mission of his own. We lived in an agony of suspense until his return.

Well, this summer after many long years of farming with few holidays, we took a trip, and on our return, to our amazement not only was Kinky here awaiting us, but also another



And then tragedy struck! You who have loved a dog and lost him suddenly, will know the heartbreak and emptiness of existence for a little while after his death.

An English uncle came to pay us a visit. It was harvest time. He loved our farm life, especially the animals, and for two weeks devoted himself to making friends with Kinky, and finally succeeded. It was with great triumph he announced that Kinky would follow him. It was a blistering Saskatchewan August day, and the uncle decided to take pictures of the combine in action, so everybody, including Kinky, went out to the combine, which at the time was motionless in the field for greasing operations. Kinky, panting in the heat, lay down in the shade of the machine. That was the end of Kinky. The combine moved away and Kinky was dead. It just couldn't be-our Kinky dead! Mother rolled pie crust that morning and a stray tear would mingle with the dough. Mother loved Kinky so.

It was a subdued meal that dinnertime, and then Dad, to cheer up Mother said, "I shouldn't be surprised if that stray doesn't have pups." And so it was! After about ten days, we heard whimpering under the brooder house, and the little stray came out with a new glad look. She had pups

but we couldn't see them. She had them well hidden far back under the building. After about three weeks we saw them —they came out to the sunshine—six fat miniature Kinkys, all identical, all little Kinkys.

Can this be immortality?—D.K.W., Macklin, Sask.



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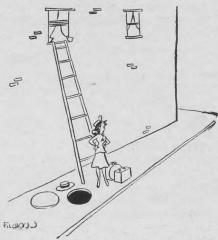
Pretty As A Kit Fox

Continued from page 17

"I have," said Obie, "and she's gone. I'll never see hair of her again.

I got a feeling she's not far away," Poke said. "Of course, it'd be impossible to locate her now. But after snow falls, I'll help you track her.'

Obie groaned. Not that Poke Miller wasn't up to tracking a black fox or any other varmint of the woods. She was practically as good as he himself on the trail and even with a rifle, Obie had to admit. For the past two years he and Poke had run the joint Wyatt-Miller trap lines together each winter,



"I suppose he's chasing another woman already!"

share and share alike. But lately she'd had a motherly attitude that made him feel accountable to her, and he was fed up with all such.

"I GUESS losing that vixen makes a terrible difference with some people, doesn't it?" Poke said pointedly. "Come to think of it, you look like you'd been finding that out. I can just imagine how some folks take it-Bettina Starbuck, for instance.'

Obie jerked round. "What about Bettina Starbuck?" he growled.

'Nothing, if you like the way she's been treating you-like poor steprelation just because you lost your chance at a fox farm."

"You sassy brat," Obie cried.
"Who's been telling you that?"

'All you'd need to know that would be to know Bettina.

Poke had a mind as sharp as a nettle, even though there wasn't much of anything in it. What Obie wanted now was to get her off the subject before she dragged all the details out

"She's been mean as mud to you, hasn't she?" Poke went on. "Serves you right, though. You could have married her back in the summer, but you didn't wake up till you'd lost your vixen-

"You leave Bettina out of this," Obie yelled.

"She still likes you. She's had her cap set for you for two years, but her folks won't see her marry a poor trapper. Her father's all for Whit Turner and his money, and Whit's been around considerably lately. She'll marry him unless you think up something smart-"

"What're you getting at, you little weasel?"

"I mean you need another woman for a foil," said Poke weightily. said Poke weightily. "There's just one way to bait that little Starbuck hussy. Jealousy. I'm your woman. You and I'll be seen together for a month or two-at dances and everywhere. You'll make a great big fuss over me-

"By honey day!" cried Obie. "That's the best one I've heard in a long-comeshort!" He rocked back and forth and whooped with the superior laughter of twenty-one. Poke Miller pinked up miserably and her lip trembled. Then she flared like a priming pan.

"You'll thank me for it later, you big moose!" she said, throwing some of Obie's traps into a corner. "And you Obie's traps into a corner. won't be ashamed of me either. I suppose you don't even know these lily complexions like Bettina Starbuck's come in tubes and jars. I guess it wouldn't break your heart if I could spoil Whit Turner's game with Bettina. would it? I know I could-if you began acting interested-

"You're a downright, cold-out fe-

male anyhow," Obie guffawed.
"This is Saturday," Poke said. "Bettina's going to be at the dance in town with Whit tonight, so you'd better take

"Bettina," said Obie scathingly, "is visiting her relations at the Forks tonight. She told me so herself."
"She told you!" Poke managed a

waspish and withering smile. "Ill bet you the first fox I take on the line that she'll be at the dance. You can go down and see for yourself if you

'That's a bet," Obie roared.

"And if she's there you and I'll go to the dance?"

"Yes, but not in any britches," Obie warned. "You own a dress, I reckon?"
"Don't you worry," Poke said.

"I'll dance four-five pounds off you," Obie said witheringly. "You sure do need it to keep yourself in shape,' he added by way of relieving his temper. His thoughts were on Bettina again and there was a large lump of indissoluble misery in his chest.

"Fat, you mean?"

"Yeah, You're too fat to slick it up on a dance floor. Look at your legs!"

They both did so and Poke flushed angrily, for her faded blue jeans showed considerable strain in spots. "That's what you think," she said haughtily. "You can tell me about my dancing later. You think all women should be thin and wishy-washy like Bettina Starbuck. I don't know why I bother over anybody so dumb." She pulled a tam over her short bright hair and brushed past Obie, her coonhound at her heels. "You can just clean up the rest of that truck yourself," she called over her shoulder.

T was pride that sent Obie high-T was price that soll tailing to town at eight o'clock that night. He hoped to prove Poke Miller wrong, but the first girl his eye fell on as he entired Town Hall, was Bettina, squired by Whit Turner, all buttoned out in new store clothes. Whit was little and varminty and brash, and it puckered Obie to see Bettina in his arms. He was on the point of striding in and having it out with Bettina then and there when someone touched his

He had to peer a second time to believe his eyes. It was Poke Miller, pranked up in a fetching flowered dress with enough ruffles and truck for a queen on a playing card. Her sorrel hair was done up pertly above her ears. That afternoon she'd had her usual freckles, like a light scattering of nutmeg. Tonight there were none. Her face and slender neck were as lily white as Bettina's had ever been. She



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EARLY ARCTIC looked downright slender in her flounces, yet ripely rounded; pretty as a kit fox in a new fall coat. Four young bucks were also taking note of these

"I knew Bettina'd be here," she come. Supposing we dance—if you're not ashamed to be seen with a fat girl."

Obie gulped. He hadn't gotten out a word yet. But he came to life as her arms lifted to his. Had somebody whispered something about being reckless? He swept her out on the crowded floor.

Town Hall was packed till the un-derpinnings swayed. Better than a hundred and fifty people were squandering over the sixty-foot dance floor, all decked out in their best. Poke Miller had fallen into Obie's mood, or maybe she was there beforehand. Dancing with her was no chore; in fact it was a lot like being electrocuted. Amazement tempered Obie's churlish mood. He had joshed her about being fat, but she was featherlight on the floor. He'd seen her around in blue jeans and moccasins so long he'd lost track of what she was. Now his eyes and his unconsciously exploring hands apprised him of his

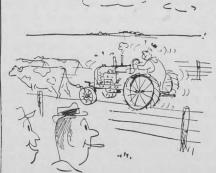
"Beats all how these ruffles and didoes can fool a feller," he gave out callously.

"Doesn't it?" said Poke. "But it takes these limp and skinny ones to really fool a man with their ruffles. . . Keep it up, Obidah; you're doing fine and practically everybody's looking at us. Just keep talking and they'll think you're crazy over me, long as they can't hear. Oh, it doesn't matter what you say," she said with sudden convincing animation; and then very audibly and coyly: "O-oh, Obie, stop!..."

SHE had taken Obie by the ear, pulled his head down into range and kissed him warmly on the mouth. Obie quivered like a stuck porpoise. His face flamed and he hadn't even the presence of mind to lift his head. Poke thought he was angling for more and kissed him again with the juice on. She had to break his hold and kick him in the shin to get him moving again.

"Whit Turner's looking now," she whispered, "and so is Bettina, so keep bending close. Smile—don't gape like a stranded fish!"

Obie complied, but his smile was just toothy. Truth was the young man had never been around any, except on his own trap lines, so that the hug and kiss of a fetching little armful, sent the blood rushing to his head and caused his reason to decamp like the wild birds in the fall. He was still feinting for air when the music stopped and he and Poke found themselves



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standing near Whit and Bettina. Close enough for Whit to call out in his varminty voice: "Say, how long's this been goin' on?"

"Oh, weeks and weeks," bubbled Poke, clinging to Obie's arm.

Obie got hold of himself enough to edge close to Bettina. "So this is the way you spend an evening with your relations," he said.

Bettina's eyes went big and glassy. She backed visibly away.

"I'm awfully sorry, Obie. It's this way, father came down with chills and a temperature about dark-so we didn't go. And then Whit called and we came here-

"Funny how quick your Pa got over it," Obie drawled. "I just now passed him in the street, big as life and twice as healthy.

Bettina seemed unable to pry up an answer to this, but just there the music started again. They drifted apart.

"We've joggled 'em out of a year's growth," Poke said brightly, as they swung onto the floor again. "It's really working isn't it-our plan?"

Something was certainly working but Obie wasn't sure just what. "Fine, he said thickly. "Slicker'n a clay road."

It was all easy enough, with Poke pulling the strings. Obie merely permitted himself to be taken in tow. An occasional kiss and the nestling of a red-gold head under his chin didn't hurt things in the least. Twice from across the room, Obie caught Bettina Starbuck's eye with more than a little snap in it.

Obie was long and rangy and a little gaunt in the face, and loosecoupled in the middle like all very tall men. About him too was a lovable air of emotional uncertainty, just the sort of thing that brings marriageable young females flocking like kites around ripe meat, eager to guide the big dumb thing into life's proper channel-namely the grubbing of brush and the building of fancy cabins with split-log floors. Obie had been too busy trapping and thinking about Bettina to be aware of these things. Now that he was on the loose he found himself running a gauntlet of eyes and smiles. And so, too, did Poke Miller.

BEFORE long Obie's shoulder was sore from the pokes of the young bucks cutting in for a whirl with the delectable Miss Pauline Miller. Poke had to dance with ten different boys that night and Obie with as many girls, but not once did he dance with Bettina.

A queer giddiness had begun to flow over him. He'd been all wrong about a lot of things, including himself and Poke Miller, and it did him good to find it out. He took Poke home about midnight, a little above himself with one thing and another. A moon big as a cartwheel was doing its stuff above the pine tops. At Poke's door she lifted her face and offered a light one, by way of good night. Obie's steam rose again and he hung on. His grip was reaching the point of rigor mortis when another sharp kick in the shin loosed all holds and Poke was suddenly gone, leaving him alone in the moonlight with a dizzy feeling and a new idea. A small svelte idea with a flowered dress and red-gold hair.

Next morning Obie awoke late with a dark brown taste and a dark brown outlook. He had the usual virginal reaction to the night before. A shameful advantage had been taken of him and he loathed the woman who had coerced him out of the guileless and innocent drift of his sylvan days. He put Poke Miller back in her faded jeans and hated her. He put Bettina Starbuck back on her pedestal and mooned over her. He mooned over the lost Tina too.

"I've et long since," Ma said, "but there's bacon and coffee on the stove."

She eyed Obie cannily as he ate.

"Goin' to start layin' out the line," Obie announced.

"'Fore snow flies?"

"Snares an' springtraps don't call' for snow."

"Hm," said Ma. Just Hm. Today Obie craved to be alone in the deep woods and just think, pensively, but as he approached the storehouse Poke Miller stepped out the door.

"Good morning, Obidiah," she greeted. "How do you feel this morn-

ing?"
"Fine," said Obie mişerably. "Just

"I felt kind of sorry for getting so puckered at you yesterday, so I came back to finish cleaning out."

"No call," Obie grunted. Then he turned to gape. Poke was back in britches today, but they were britches cut for a woman, not a man; tan whipcord affairs tightly clasping the alluring curve of the knees and flaring upward to a half-hiding, half revealing fulness above. She wore high-laced boots and a snug blue



so form-fitting that Obie stumbled getting up the shed-house steps. The chestnut sheen of her hair under aknit cap rivalled the fall leaves in the hardwoods. Not a freckle in sight.

Obie took up some leather thongs and a hatchet and tried to light a

shuck for the woods, but it was no go. "Going to get springtraps, huh?" said Poke. "Fine, I was just thinking we'd better start work on the line. brought along a lunch just in case."

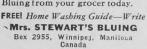
BIE couldn't connive any way to get rid of her, but after a while he didn't want to anyway. The rest of that morning was busy, rather event-ful, but not unpleasant. Obie led the way to the thicket-choked stream where mink and marten were plentiful and began work. He was past master of trapping and trailing; he could just think about a wild thing and know what it would do, where it would go. But today he sacrificed considerable craft thinking about Poke Miller and dwelling on the toothsome picture she made in the bright fall sunlight. She had brought along a light shotgun and having herself a time knocking over partridge. She had bagged three and



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was creeping up on a fourth when her startled cry jerked Obie round.

"Lord of the Jay Birds! Obie, look!" About a hundred feet away Poke was facing a big bull moose that stood motionless, its gaunt head and forequarters half-masked in the undergrowth. Ordinarily one can tell that a bull moose is coming hundreds of yards away by loud snortings and snappings in the brush, but there are times when he drifts through the densest cover with no more sound than a stalking cat. It is then he is really dangerous, as Obie knew, for it is then he is on the prowl for a lady moose. Something had been keeping this one from the side of the mate nature had intended for him in these wilds, and he wasn't sure but what it was Poke Miller. His little eyes glowed red with paranoid suspicion.

"Don't shoot," yelled Obie. "It'll make him bran-fired mad. Back up real quiet toward this tree. If he charges run and shinny up it." He indicated a low-branched spruce as Poke glanced behind.

She complied, while the moose watched, getting madder by the moment. Poke was about twenty feet from the spruce before the bull made up his mind. With a wrathful bellow he came pounding across the clearing as on the wings of a high wind.

'Run!" roared Obie. He was already at the tree and hoisted Poke aloft, swinging up after her with not an instant to spare as the moose swept beneath them.

For the next two minutes the big bull put on a pantomime of murder and mayhem below that made the two in the tree quake from the sheer reflex of the thing. He bawled and clashed his antlers against the branches. Poke whimpered and clung to Obie. Obie clung to a branch with one arm and to Poke with the other, patting her in spots and muttering reassuringly.

How long this might have gone on there is no saying, had there not come echoing through the woods the distant unlovely bawl of another moose. It must have been a lady moose seeking for a mate, for the wrath of the big bull fell away instantly and he went crashing away through the thickets, with an answering call impetuous as a bugle note.

Poke and Obie started home shortly afterward. As they parted Poke raised on tiptoe and placed a quick kiss on Obie's mouth. He reached for more but she ducked.

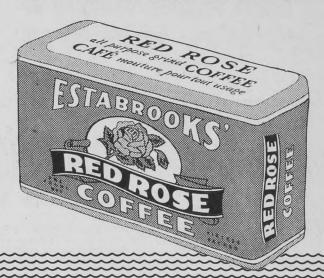
"That's all for today," she said. 'Just to keep in practice, you know. Remember, there's another dance in town Wednesday night, and Bettina's bound to be there. You can call for me as early as you like.

WEDNESDAY night came at last and Obie appeared at Poke Miller's house, a bit haggard from waiting. For three days he'd been waiting to get in some more practice, but he hadn't been able to find Poke anywhere.

By now Obie had loosed all holds and taken a header into the reckless role Poke had mapped out for him. It was more than a little exciting to be thrown a lot of hot curves by a girl who was beginning to keep the young bucks of the region awake nights. Gone was the bothersome brat he had formerly tolerated; this was Miss Pauline Miller, already much sought after, and liking it all. Obie

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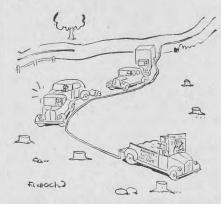


felt he was seeing her for the first time, and in a way he was.

At Town Hall they took up their game just where they laid it down. "I just love these dances," Poke beamed. "They always make my heart go poppity-pop. And such a lot of wonderful fellows come. I shouldn't wonder but I'd find me the man I've dreamed about, by the time you get Bettina back."

Obie scowled. Poke looked prettier tonight than he had ever seen her, and happier. She had a gay arch glance for every boy in the place.

"There's Bettina," Poke said a bit later as they danced. "I knew she'd come."



"This ought to be good. The fellow in the sedan is going to do some passing."

Obie turned to look. Bettina saw him and gave him a radiant smile. She even signalled him, an impatient little gesture of invitation.

"You see," said Poke. "What did I tell you? It's working. She'll come a-running in another week. I'll tell you a little secret, Obidiah," she whispered. "Whit Turner came out to call on me last night and I let him take me out. I don't like him, he's horrid, but it'd be a great joke, wouldn't it, if I took Whit right away from Bettina? It'd help out our game—"

"Our games workin' fast enough," Obie grated. "You can leave Whit Turner out of it."

He bent to grab a kiss, but Poke squirmed aside.

"Let's not overdo it, Obie," she said.
"Bettina's watching us like a cat at a
mouse hole."

Later Obie danced with Bettina herself. By the glow in her big eyes and the way she clung to him like an extra layer of skin, it was plain she was not averse to making a harnessed man of him, fox farm or not.

"Why haven't you been over lately?" she asked, and hadn't even the grace to blush.

"I'll come one of these days, sure 'nuff," Obie said lightly.

A few days back all this would have set him on his ear, but tonight somehow Bettina looked and felt quite not unutual to him. Dimly he realized that it was the chase not the quarry that had gotten him steamed up from the start. The fact was, he was watching Poke Miller most of the time he danced with her.

He found himself up against real competition there. Somewhat later, after his shoulder had been poked about a dozen times by the cut-in boys, he found himself standing in stag line waiting for another turn with Poke, and feeling touchy as a mule in fly-time. Just ahead of him he overheard big Luke Gallant declaring to a friend:

"That Poke Miller's the purtiest girl in the whole durn settlement."

OBIE seethed like a captive leviathan. It hacked him plenty to think that only a week ago he'd had Poke Miller all to himself. He'd had her for the past two years, if only he'd had the sense to see her. Nature had certainly fashioned her with an extra loving hand, but all of it had been hidden up to now by blue jeans and moccasins. Here she was, with a dozen big lunks like Luke Gallant all steamed up over her fetching ways. And one of them was like to goal her for keeps, the way things were moving.

Abruptly Obie broke out of stag line, and a moment later he broke one of the time-honored rules of the dance by brushing aside Poke's partner with a bear-paw sweep instead of the conventional tap on the shoulder. The fact that her partner happened to be Whit Turner was queer, or maybe it wasn't. Whit flared up in his varminty way, but one look at Obie's face liquidated that problem.

"Why, Obie!" Poke cried. "Here you are getting all steamed up over me, with Bettina pining on the vine."

"I fetched you down here, I'm goin' to dance with you," Obie said thickly. It was remarkable how hazy the

It was remarkable how hazy the Bettina idea had become to him. For the past few days, he realized, it had totally skipped his mind.

Obie wrapped a long arm about Poke and swept her into the dance.

"I was never so mortified in my life," Poke said with tart sarcasm. "Here I've been spending my time trying to help you. And here you are pawing me right in front of the whole town! I always thought it was Bettina you were gone over—I can't imagine why!"

"Plague take Bettina! What we need now is more practice," Obie said, breathing rather noisily.

He drew her closer, bent for a kiss and collected it with the heat on. After that Poke made no demurrer beyond adjusting the fit of Obie's arm around her waist. For the next half hour they danced on air, shamelessly kicking the clouds around, nor was there any interference, for it was plain from Obie's look and attitude that it would take a lot of help from high heaven to change his mind and bent.

"Poke, honey," Obie burst out hoarsely, "You're the prettiest girl in this whole darn country." He dove for another kiss.

"You'd best rehearse that for Bettina," Poke sent up a final flare. Looking into his eyes she perceived that he was a gone gander for sure, with no more judgment left than a jellyfish. Still for some reason she wasn't committing herself.

They left soon afterward. It was a good twenty minutes walk to Poke's house, but they made it in less than an hour and a half, what with stops along the way for more practice. In fact, Poke herself was doing quite a lot of the practising, and saying in smothered disconnected sentences that she had never aimed to let that bubble-headed Bettina Starbuck marry him anyway.

THEY had reached Poke's door by now and since they were speaking of marriage anyway, Obie popped the big question. To his amazement Poke began crying bitterly.

began crying bitterly.

"For three whole years this was all I ever wanted, Obie," Poke sobbed, when she could find her voice. "But now it can't ever be—"

"Can't be! You taken leave of your senses?"

"It's all worked out, just as Ma said it would," Poke told him tearfully. "Now the time's come for the dirty work. You're going to hate me for it always, but here goes. "Twas me, Obie, that turned your vixen loose!"

Obie's arms fell to his sides. He stood there stunned and staring, in his face the numb bitterness of unbelievable disappointment.

"Your Ma can tell you the rest of it," Poke sobbed. "'Twas part her idea." Then the door closed behind her, and Obie was striding homeward like a man in a maze, mad as a boar with a boil.

Ma was still up. Her canny gaze passed over him like a fluoroscope as he came in.

"Looks like you've come to your senses at last," she gave out.

"What's this about you an' Poke robbin' me of my vixen?" Obie cried. "Set you down," Ma said, and Obie set.

set.
"'Twas my idea about the vixen from the start," Ma said. "Six months gone when you got thinkin' about Bet-

tina Starbuck an' talkin' marriage, I sort of lost my head. 'Twasn't losin' you that puckered me so, 'twas losin' you to a flittin' an' giddy piece like Bettina, never cut out for our ways. 'Twould o' ruined your life for you, 'cause a Wyatt gives all in marriage; his woman's his heart an' life. Never heard of a lukewarm one in all our



"Do you mind? He loves to draw, and it keeps him quiet."

line. An' there was Poke Miller right under your nose, pinin' her heart out for you two years gone. Runs deep, like us, Poke does; pretty as a young kit fox an' timber-bred in the bargain. But you hadn't the sense to see her. Like your father before you, took a woman to make up your fool mind for you. I ought to know.

"'Twas plain enough what roused Bettina; your fox farm, not you. I talked with Poke an' we agreed to turn your vixen out of the pen. If Bettina still wanted you after your chance for the farm was gone, we'd have no more to say. So Poke dug under the wire one evenin' whilst you was away."

Ma reached for the tobacco and filled her pipe.

"Yes," she said when the bowl was glowing, "I just set an' watched her turn Tina out in the dusk and then go off home a-cryin'. But I wasn't addled by love. I hadn't forgot what I'd learnt of the woods either. That vixen was near about tame after all them months in the pen, an' that same night I snared her as she prowled around the chicken-run. She's been in a pen ever since, down at old Anse Dugmore's cabin on the river. So I guess there's nothing to hinder you going ahead with your farm now, when you an' Poke has simmered down a mite. Was I you, I'd hustle over to Miller's right now an' tell her Tina's safe.'

C.F.A. Debates Marketing Boards

HE Niagara Falls convention of the C.F.A. held in February made it evident that the next step in the establishment of orderly marketing for farm products would require the formation of provincial marketing boards, and a subsequent co-ordination on a national scale. Accordingly, a meeting was called for March 21 in Ottawa to explore the situation and form plans for action.

The March meeting was well attended by 75 members of the Federation from all over Canada. The discussion lasted two days, the first being open to the public, and the second a closed session. A good deal of time was taken on the first day discussing price supports. Premier Douglas of Saskatchewan declared that it was impossible to separate this question from the one of marketing organization, and pressed Mr. Gardiner, federal minister of agriculture, for a statement of policy.

In reply, Mr. Gardiner said that past actions could not be taken as a guide for the future. Each product must be considered with regard to the situation which existed, and dealt with in a manner thought to be fairest to both the producer and consumer.

Mr. Gardiner said he agreed that the question of support had a bearing on what might be done under marketing legislation. He said he thought the proper solution was the formation of farmers' co-operatives, whether or not price support was available. There might be more need for co-operatives if price support was not operating,

Discussion turned on the question of forming producer controlled provincial marketing boards which could be certificated under the Agricultural Products Marketing Act passed at Ottawa last year, and commonly known as Bill 82.

In his review of the recent history of marketing legislation, Mr. Gardiner said that a demand for a bill similar to last year's appeared as early as 1938, but the government did not consider the time ripe for it. Later, he said, the federal government, under the War Measures Act, had power to

Experts explore steps necessary for organization under provincial and federal acts

take delivery and control the sale of farm produce. However, this was actually a provincial right, and so with the cessation of the war, provided a product remained inside a province, the federal government had no authority over it. But when the province decides it has a surplus, the Dominion then can exercise some control.

Under Bill 82, H. H. Hannam, president of the C.F.A. explained, the federal government may grant authority to a provincial marketing board to extend into the inter-provincial and export field any or all of the powers which it has a right to exercise within its own province.

R. H. Milliken, solicitor for the Saskatchewan Wheat Pool, undertook a review of the various provincial acts at present in existence. There are only four provinces, British Columbia, Saskatchewan, Manitoba and Ontario which have acts covering every contingency, and of these the Ontario act probably requires considerable overhauling before organizations formed under it could be certificated under Bill 82. Boards functioning in Ontario are not similar to those in the other provinces in that their function has been to negotiate prices.

Features of the fruit scheme operating in British Columbia were outlined for the meeting by George Barrat, chairman of the British Columbia Fruit Board. There were five vital points, said Mr. Barrat, which should be incorporated into any scheme. Some of these powers might never be used, but it was best that they be included. His five points were: (1) power to regulate; (2) power to raise money; (3) power to fix prices; (4) power to designate an agency; (5) power to pool proceeds of sale.

Another important point emerged in general discussion. It now appears that a provincial board has power, not only over the products grown within that province, but over any competing produce offered for sale within its boundaries.

Even at the Niagara Falls conference, it became apparent that poultry products would be the first which could be organized for marketing under Bill 82, because of the progress already made in forming provincial units. Carl Kapler, president of the Alberta Poultry Association which last month marketed 55 per cent of all the eggs sold in that province, said he felt they had until November to get a co-ordinated scheme into action. He proposed that the four western provinces, which were definitely interested, could get together and work out parallel programs, looking to joint action, under Bill 82. He suggested that the eastern provinces which cared to do so, might act likewise. Then the two groups could meet and compare ideas with a view to a larger organization. Jack Brodrick, president of the Ontario Federation, stated that producers in his province had already set up a provisional organization and were definitely going ahead with their

THE difficulties in the way of establishing a smoothly integrated scheme working harmoniously across the whole country are impressive and speakers did not minimize them. Alex Mercer of the British Columbia Federation said it was important that all areas interested in the marketing of one product get together. Otherwise there was danger of one province or group of provinces defeating the purposes of another. J. H. Wesson of the Saskatchewan Wheat Pool said that all provinces producing a given commodity, whether in excess of its own provincial requirements or not, should join a national scheme.

Delegates dispersed at the end of the conference to confer with their respective provincial bodies on legislative changes needed to bring provincial boards into a position where they could take full advantage of the Federal Act, and to proceed with organization.





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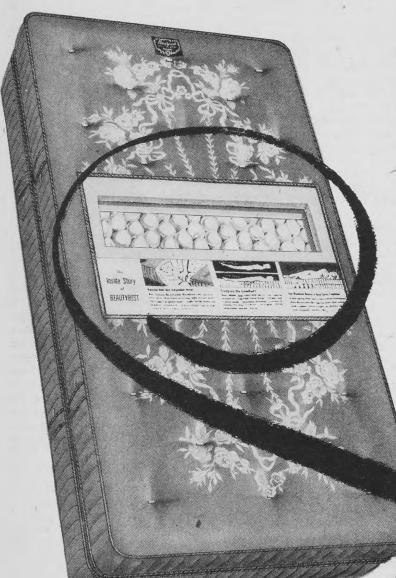
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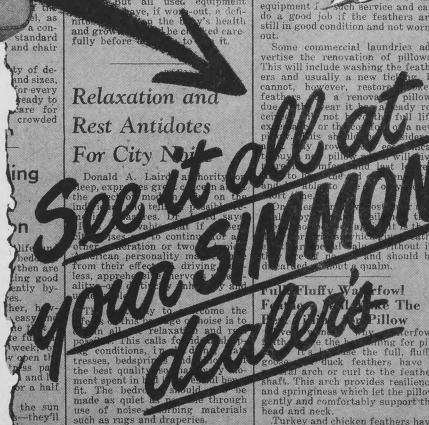
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The Countrywoman

Contrasts

Strange, that we creatures of the petty ways,
Poor prisoners behind these earthly bars
Can sometimes think us thoughts with God ablaze
Touching the fringes of the outer stars . . .
And stranger still, that having flown so high
And stood unshamed in fiery presences
We can resume our smallness in mien or gesture
What that memory is.

-RICHARD BURTON.

T is fitting that the full and dramatic story of the winning of the franchise by Canadian women should appear in book form this year. That story which is concerned in the main, with people, organizations and events of the past 50 years, though it had its beginnings in the '80's and '90's, has been ably recorded by Catherine Lyle Cleverdon, Ph.D. Her book, The Woman Suffrage Movement in Canada, is published by the University of Toronto Press and has just been released. Copies should make their appearance in stores across Canada during the spring and coming summer.

I found it fascinating reading. In it appears the names of many men and women who have played a leading part in the public life of Canada since the turn of the century. Its story is known, in part only, to a comparatively small number of people of Canada. It has hitherto been told in piecemeal fashion in current publications and frequently from a strongly biased viewpoint. Older Canadians will rejoice in having the full story set down by an impartial observer. It will serve to refresh their memory as to exact dates of events and to the utterances of many political and organization leaders. To young people it will possibly come as "an eye opener" that progress, even of a just cause, comes so slowly. It will serve as a reminder to those of a radical turn of mind, that a tremendous amount of effort and education is required to change habits of thinking and to secure reforms through legislation.

The Woman Suffrage Movement in Canada is a book of some 300 pages of good clear type, which makes for quick and easy reading. Its style is simple and direct, which will go far towards catching and holding the interest of readers. It will appeal to those who have been or are interested in public affairs. There are many footnotes to furnish sources of reference and exact detail; valuable appendices giving a statement of Women in Canadian Politics drawing comparisons with the progress in other countries; Bibliographical Notes; a table of dates of the achievement of political equality in the various provinces and the Dominion. These features of the book will satisfy students of social and political thought in Canada.

Its preparation, writing and editing must have taken many months, even years of careful and painstaking effort on the part of the author. There is no doubt as to her own interest in the subject chosen. She has done a masterly job of simplifying the material gathered. The treatment is on a regional basis with the story of the woman suffrage movement told as it developed in the individual province and in the Dominion.

A glance at the chapter headings with the added theme phrase, gives some indication of the effectiveness of this type of treatment: Introduction—chivalry and justice; Ontario—the pioneer; The Prairie Provinces—democracy's "grass roots"; British Columbia—the individualist; Ottawa Interlude—women's political rights as a federal issue; The Maritime Provinces—stronghold of conservatism; Quebec—the first shall be last.

Review of a new book which offers the first authoritative and comprehensive account of woman's struggle to obtain the franchise in Canada

by AMY J. ROE

Oddly enough the story has been written by an American rather than a Canadian author. Dr. Cleverdon, from her home in Bronxville, New York, in the Preface has this to say about "the different routes traversed by the United States and Canada in reaching their goal of nationhood. The southerly and more assertive member of the family chose a picturesque shortcut. Beset with excitement, even violence, at frequent intervals, it has afforded a paradise to the historian and tale-spinner. The more circumspect northern member chose a longer and less scenic route, arrived safely in the course of time—and then lamented audibly over the lack of color in the journey.

"Perhaps this feeling, so common to Canadians, that their country's story is too prosaic to interest anyone accounts for a curious omission in its historical literature. Whatever the reason, there never has been a full account of a significant chapter in the development of Canadian democracy: the winning of political equality of the feminine half of the nation. This is in marked contrast with Great Britain and the United States where women's efforts to attain equality have provided the basis for extensive writings. It is true that no Canadian suffragist was ever known to throw herself under the pounding hoofs of a race horse, nor even to empty a bag of flour upon the head of an unfriendly lawmaker. But if Canadian feminists robbed their story of color by waging a wholly dignified campaign, their painstaking and often costly struggle for political freedom surely merits its page in the Dominion's history.

"That the first effort to fill this void should be made by an American rather than a native writer may appear regrettable, even presumptuous to some Canadians. Some justification may perhaps be found in the possibility that where the story has an element of conflict between rival factions, an outsider may be less open to the charge of 'playing favorites'."

Catherine Cleverdon claims a sense of kinship with Canadians in that "of her grandparents, three were born on Canadian soil." She also points out: "the good neighbor' policy is vested with concrete personal meaning for me as a result of this Canadian venture. Dependent, as I was, for material upon many Canadians, I found them helpful, hospitable and generous to an incredible degree. On several occasions irreplacable documents were lent without question by both libraries and individuals. . . Canadians penned long replies to endless questions, granted interviews and supplied introductions to others who could help."

E would like to know more about the author. We understand that she is a young woman, at present teaching, who began the study as a part of a thesis required for her degree as a doctor of philosophy in history. She has studied under Professor J. B. Brebner, of Columbia University, who is one of the most famous of Canada's expatriate professors. Dr. Cleverdon acknowledges generous grant-in-aid from the Canadian Social Science Research Council to carry on work on the book and assistance from the University of Toronto Press, in helping to carry the balance of the cost of publication. We are grateful that her interest turned to this particular field of study; that her talent and work merited and received encouragement and support from Canada.

The book should have a wide appeal in Canada. It mentions the pioneer organizations which launched and worked for the suffrage movement. Among these were the Women's Christian Temperance Union, the National Council of Women and the different franchise leagues under varying names. It mentions too, others which rallied to

their support such as farm men's and women's organizations, labor, the Women's Institutes and later some of the political party groups. There were among that number many distinguished men as well as women; journalists, editors, lawyers, doctors and members of the protestant clergy.

The forecast is ventured that The Woman Suffrage Movement in Canada will become a "must" on the reference bookshelf of many women's clubs in this country. It will furnish much material for study and discussion. The full story as set down, affords a good basis for further writing on the subject by Canadians who possibly have still more to tell about individual incidents or personalities connected with the movement. Many will welcome the book as a gift idea to send to friends at home or abroad. We hope, because of its author, that it will be widely read in the United States. It will help to explain Canadian thought and action to our American neighbors and so help towards a better understanding.

On opening the book, one is inclined to turn first to the chapter which gives the history of the suffrage movement in one's own province. Present-day readers of The Country Guide will find much interest in the chapter The Prairie Provinces—democracy's "grass roots." The main events covered occurred in a comparatively recent period of time and will be remembered by men and women of mature years. Frequent mention is made of the names of individuals who played a part, many of whom are familiar to rural people of the West. The author points out:

"The prairie provinces, which were the first to achieve woman suffrage had the shortest and easiest campaign to wage. Only in Manitoba was there any considerable activity prior to 1910, or a struggle with an unfriendly government. In Saskatchewan and Alberta it was only necessary to arouse enough general interest in the issue to ask for and receive the franchise from governments that never denied the justice of the request. Manitoba again was the only one of the three in which the final victory was mainly attributable to the efforts of a well-organized suffrage society. In the other provinces, the prime agitations were powerful farmers' organizations and their women's auxiliaries."

IMPORTANCE is given to the role played by the Grain Growers' Guide, under the editor, George F. Chipman, through editorials and articles, and to Francis Beynon, in charge of the women's pages from 1912 to 1917. On the Manitoba Free Press were other supporters at the same time: Lillian Beynon (now Mrs. A. V. Thomas), E. Cora Hind and J. W. Dafoe, editor-in-chief. On the Farmers' Advocate was Mae Clendenan. Emily Murphy who had been a writer with the Winnipeg Tribune, moved to Edmonton but continued writing books and articles. And there was the popular speaker and beloved writer Nellie L. McClung, who was a co-participant in the famous "Mock Parliament" put on as an evening's entertainment at Winnipeg's Walker Theatre. Mrs. McClung figured in many delegations to government. Her sense of humor and gift of quick retort turned many a strained and serious moment into one hilarious mirth. In fact, the best personality portraits which emerge from the book are those of Nellie McClung and Emily

Prominence is given to the story of the five Alberta women who, in 1927, carried a petition to the Privy Council of Great Britain regarding the right for women to be declared "persons" and so be eligible for appointment to the Senate. These included the two just mentioned as well as Hon. Irene Parlby, Mrs. Henrietta Edwards and Mrs. Louise McKinney. Of this the author says: it "became the basis for the most important legal action ever undertaken by a Canadian woman. . . . The heroic struggle waged by the five justly celebrated Alberta women to win the right to sit in the upper chamber is heartening evidence that once aroused, Canadian women can make their influence felt in politics."

The Fashion Picture

by LILLIAN VIGRASS

HE softer, more feminine look is once again featured in the fashion picture of 1950. There have never been prettier, more becoming clothes. Simple, fresh and lovely, they are gently styled to thrill the feminine heart.

Softness is portrayed in a wide-atthe-top look which stems from a slimappearing skirt. The bodice is softer, easier and fuller; the sleeves are wider and pushed up, draped or cuffed; shoulders are rounded and only slightly padded; the armhole is deeper, beginning sometimes almost at the waist. Clothes are not as fitted as were last year's models; neither are they bulky. The natural bustline and small waist emphasize the feminine theme.

Fluid lines take the place of the fullness of past seasons. The pencilslim skirt does not always mean it is perfectly straight or plain. Pleats, all around or in groups, unpressed pleats or gores, give a graceful but straight line on some; interesting pockets or pocket cuffs give the desired detail on

This silhouette, or costume outline, can also be inverted to give a closer fitting plain top, finished with an accordion pleated or full skirt. The beauty of this mid-century fashion year is the fact that there is more than one silhouette, more than one skirt length, more than one sleeve outline accepted as "fashionable."

The color range this season is as wide as the sky. The color scheme in fact is taken from the sky. The leading basic shade is navy; a clear, colorful navy with a warmth to it like a spring night. The secondary colors are the tones of the changing sun-beige, yellow, gold, bright orange, and the rosy hues from a dawn pink to vivid sunset red. Delicate pastels are seen too, alone or with the basic navy-chartreuse, pale blues and yellows, pink and rose. Navy and black are touched with crisp or dainty white in lingerie touches. With navy, the brighter shades of red, too, are extremely good.

The coat story is frequently short this year. Fitted, loose or belted, coats vary from 29-inch to fingertip length. They have the soft, easy fit at the top and there is not quite so much fullness at the back. Important details include collar, cuff and pocket trim. Full length coats are popular, too, and may be fitted, swagger, half-belted or belted.

NEWEST in the suit picture, but only one of the many styles, is the bloused back and belted suit of wide-and-narrow contour. Suits may be dressmaker or softly tailored. All types are feminine in appearance: and the details, dressy. Collar, cuff and pocket detail is extremely important. Skirts are slim, or slim-appearing with pleats, side slits or fold-overs. A few are gored or pleated all around. Suits, this year, can be dressed up with frilly blouses, flowers, white gloves and costume jewelry, or worn casually with tailored blouses, bright scarfs or handkerchiefs and lowerheeled shoes.

The dress and jacket ensemble is definitely in the fashion picture. Jackets are slim, belted or full. They

This mid-century fashion year shows soft feminine lines,



may be matching or contrasting in color and in fabric. Suit dress, bolero dress, redingote and two-piece dress are just as popular as ever, and feature lingerie touches, button trim or pocket, collar and cuff detail.

Particularly fashion-right is the shirtwaist dress. It is not strictly tailored but soft with button trim or touched with crisp white. The coat dress is important but it, too, has changed and become feminine in detail. Both have the "wide-at-the-top" appearance and slim-looking skirts with pleats; or are straight with darts, tucks or pocket detail.

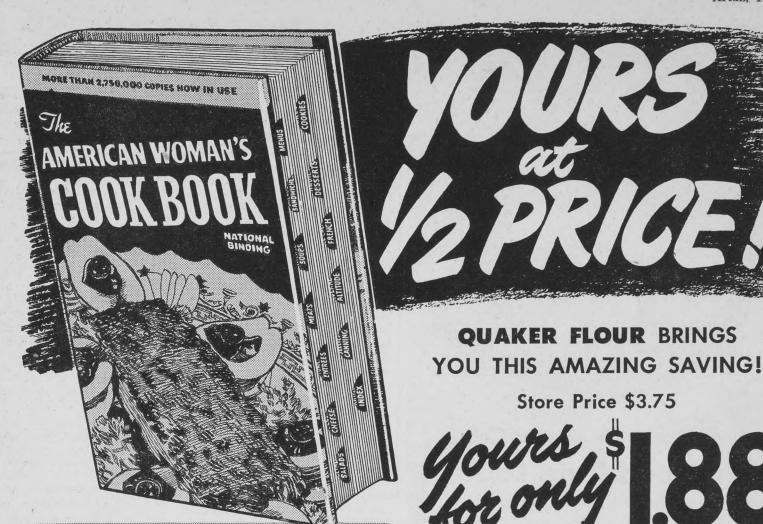
Dresses are definitely feminine this year, and youthful. Soft dresses will be worn now under the spring coat and throughout the summer. They are of many styles, and feature tunics, peplums, capes, pleats or drapes. They are soft in appearance, slim-looking and flattering. Lingerie trim, crisply tailored or dressy, may give some a "little boy" or "little girl" look. Prints, crepes, taffetas, jerseys and failles are the materials often used. Nylon is growing in importance for summer dresses and blouses as well as lingerie. In prints, small checks and dots head the list.

THERE is a wide selection of coat and suit fabrics. Important are the new pic 'n' pic, birdseye, barathea and charmaine. Glen checks and plaids, shepherd's checks, gabardine, tricotine and covert cloth are seen. There's a new woollen material for coats which is lighter and smoother than a fleece, but soft and cozy.

In hats there has never been a prettier, more feminine season. They may be of felt or straw. For early spring they are flower bedecked and many feature the all-important veiling trim, ribbons, feathers or quills. The cloche, bonnet, beret, profile hats and the dramatic large-brimmed hat are all in the fashion picture. Newest of all is the sailor. It is of as many types as there are costumes with which to wear it. It is worn a little more forward this year, coming just to the hairline. Unless the hat is so designed to be worn on the side of the head as a profile hat, it is worn straight on the head this year, and often it features this same slightly forward movement.

Hats have been designed to fit in with the new short haircut. It is a youthful and flattering hair style, easy to care for and can be worn by almost everyone. The line of the hat and of the whole ensemble are keyed to one another-the short, shaped hair style, the slightly forward line of the hat, and the new wider-at-the-top, slimskirt look of the costume.

Accessories match, contrast or harmonize with the costume. There are infinite ways to wear a scarf on a sweater or a dress-at the neckline or draped at a slim waist. Flowers, alone or in bunches, real or of fabric, are worn at the close high neckline of a blouse or dress; even with a suit the flowers are worn at the neck. Gloves vary from the very short to six-button length. Bags continue small, with the accent on width this season, not depth.



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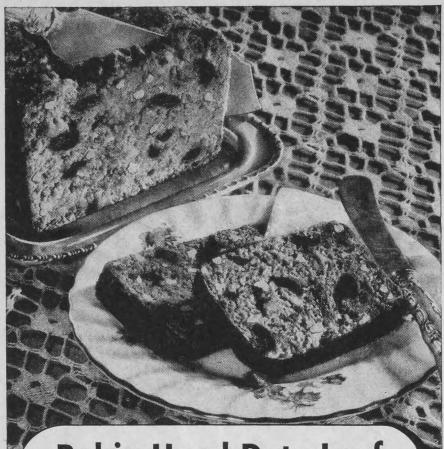
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"And here's all you need:"

- 1/2 cup Robin Hood Oats
- 1 cup chopped dates
- 2/3 cup scalded milk
- 2 tablespoons butter
- 1 egg
- ½ teaspoon vanilla
- /2 cup brown sugar Rind of 1 orange
- 1/2 cup chopped walnuts
- % cup sifted Robin Hood Flour (the flour used by 4 out of 5 baking contest winners)
- 1/2 teaspoon cinnamon
- 1/4 teaspoon salt
- 2 teaspoons baking powder

"Delicious dates, crunchy walnuts, a dash of orange rind, a nip of cinnamon — all go to make this date loaf really luscious!

And of course, with Robin Hood as your flour ingredient, you can't miss! It's the guaranteed*, all-purpose flour — for all your baking.

"Here's all you do:"

Combine Robin Hood Oats, chopped dates, scalded milk and butter. Cool.

Add egg, vanilla, brown sugar, orange rind and chopped walnuts. Beat well.

Sift together Robin Hood Flour (it's guaranteed*, remember)

cinnamon, salt and baking powder.

Add to above mixture. Stir till well combined.

Pour batter into lightly greased and floured loaf pan.

Bake in a moderate oven, 325°F, for about 55 minutes.

*Certificate with every bag guarantees your money back $plus\ 10\%$ if you're not entirely satisfied

A WORD FROM RITA MARTIN:

"This is just one of many really fine recipes I have available for you in the Robin Hood Home Service Department. Any special baking tips or information you may want

are yours, free, for the asking. Just write me."



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Know Your Fabrics

A glossary to aid the shopper when planning or buying a spring wardrobe

ACH year new and often unfamiliar terms are added to the list of popular fabrics that are being featured in the spring fashion and fabric showings. Some of these are trade names, as yet unfamiliar. Some are revivals of names of materials used in our mother's or grandmother's time.

Other fabrics are entirely new. Manmade fibres are used in the manufacture of many new materials, creating an entirely new, large group of fabrics. Rayon first, and now nylon, are the best known of these. Others, perhaps to be used in the future, include materials made from pineapple leaves, skim-milk powder and peanut shells. New processes have been developed to attain a specific finish, and so we hear of sanforized cotton that is shrink-proof, or martinized velvets that are crease-resistant.

Still other fabrics—feather flannel, nets, jacquard and dobby-weave rayons—are given names that describe their similarity to some other material. Often these names are incorrect in a technical sense as in the case of birdseye suiting, rayon and nylon suedes, or butcher linen.

A listing of some of the more important 1950 spring fabrics will serve as a guide to the shopper and help her in recognizing materials as she sees them in magazines or catalogues. When buying a new garment or length of material, ask the sales person what material is used in its manufacture, find out as much as you can about the meaning of the terms on the label describing the finish and ask about the care to be taken of the garment. In this way you will become familiar with the fabrics, will be able to recognize them again and soon come to know the ones that are suitable for your individual needs.

Nylon is the most important new textile for spring and summer dresses. We have been familiar with nylon in the form of hosiery and lingerie for some time, but the industry is expanding rapidly and each season new nylon materials are introduced to the public. Nylon now includes a whole family of fabrics—tricots, sheers and embroidered sheers, jacquards, marquisette, faille, taffeta, plisse, mesh and even a heavy cloth for auto upholstery.

Bengaline is a very firm, closelywoven fabric with ribs spaced at intervals running across the fabric. The ribs are fine, although slightly heavier than poplin. It is usually made of rayon, cotton or a mixture of the two.

Faille is a very soft, yet firm, ribbed fabric with ribs running crosswise of the cloth. Each rib is made up of several yarns rather than one large thread—making a more durable fabric. Usually it is made of rayon, silk or nylon, although cotton faille is made.

Plisse—a name given to fabrics that have a crinkled surface. The best known of this group is the cotton plisse crepe used for pyjamas and other night attire. This year rayon and nylon plisse have become very popular for dresses and blouses. It is not the weave but a pressing or stamping process using controlled heat, that gives the fabric its name. The crinkle can be puckered either in stripes or in

a patterned effect and is permanent in nylon and most rayons.

Shantung is a plain-weave fabric of silk, rayon or cotton. It is woven with elongated, slubbed, crosswise yarns, giving an irregular surface texture. It is a soft material that drapes well; suitable for dresses or ensembles.

Taffeta is a crisp, firm, closelywoven fabric with a slight crosswise yarn which is somewhat larger than the lengthwise yarn. It may be of silk, rayon or nylon.

Barathea is a fine-textured material with a pebbly surface. Originally barathea was a silk tie fabric; it is now a name applied to a fabric woven with a broken effect to produce a coarse, granulated effect or small design—generally in two tones of one color. It may be in a rib or twill weave and is made of worsted yarns.

Birdseye when applied to a woollen material implies a clear-finish staple, the face of which is marked by small indentations, produced by the weave, to suggest the eye of a bird. It is woven in a twill with alternating light and dark groups of both lengthwise and crosswise yarns, to produce a spotted effect.

Cavalry Twill is another name for tricotine woven of woollen yarns.

Charmaine is one of the trade names for *Charmeen*, a high-quality, compact-textured worsted dress or suit material. It is a distinctive twillweave fabric similar to a very fine gabardine.

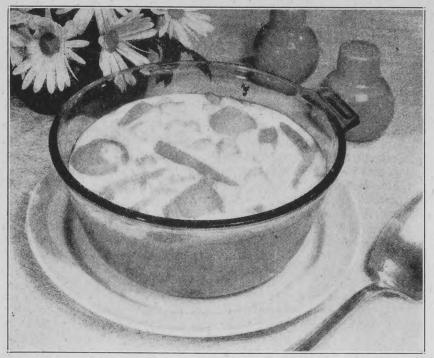
Covert is a medium to heavyweight, closely-woven cloth for coats or heavier suits. The weave is a steep twill similar to a gabardine but is covered with a soft, smooth nap. It may have a mottled or flecked appearance, produced by using dark crosswise yarns and two different shades of lengthwise yarns.

Gabardine is a firm-textured, clearfinished twill fabric, usually finer than a serge. The steep twill weave gives a characteristic single diagonal line on the face of the cloth. The fabric is rather lustrous but may be given a dull finish. Colors are solid.

Pic 'n' pic is one of the trade names for worsted or rayon suiting with a pick-and-pick weave. It is usually grey or beige in color and may feature miniature glen plaids, small checks, thin stripes or a fine tweed appearance in tones of the one color. In the pick-and-pick weave each crosswise thread is a different color or shade of color than the preceding, thus giving a fine woven-in pattern or mottled design.

Sharkskin is of two distinctly different types. Both have a sleek, yet delicate, pebbly-textured surface appearance. One type is the chalk-white rayon sharkskin used for sportswear. Woollen sharkskin is woven in a twill, the yarns going each way are alternately light and dark tones of one color. Fine color lines run from right to left and the weave rib runs from left to right.

Tricotine is a clear-finished, firmtextured, twill-weave fabric with a pronounced raised diagonal cord on the face of the cloth. It is softer to touch than a gabardine. Tricotine drapes well and is easily tailored.



Mixed Vegetables in Cheese Sauce makes an attractive and tasty dish.

Tasty Vegetables

In spring, when appetites lag and there is less variety in foods, interesting vegetable dishes help out

▶ PRING may be "just around the corner" but we are still preparing end-of-winter meals. The choice of vegetables has narrowed down to the few that store long and well, and the remainder of those that were canned last fall.

Putting pep into these vegetables is not easy and yet they are essential for the health of the family. A little forethought and some imagination will do wonders for otherwise drab appearing

New combinations of vegetables or a new sauce will add flavor appeal and relieve monotony. Cooking in a small amount of water for as short a period of time as possible will help retain color and texture. Color is also added by the use of the brighter yellow and green vegetables, raw vegetables and garnishes. A dash of cayenne is a tonic for the white vegetable dish; parsley grown as a houseplant for winter use will add eye appeal; and cheese sprinkled on a casserole and browned slightly will give the meal a lift.

For greater attractiveness and variety try a few of these vegetable dishes and combinations. Then use your imagination and develop some new ideas of your own.

Harvard Beets.

4 c. boiled beets, 1/3 c. strong cubed vinegar 2/3 c. water T. butter T. cornstarch 1/2 tsp. salt 5 T. sugar

Melt the butter; add the cornstarch and sugar. Stir in the vinegar gradually. Continue stirring until the sauce boils. Add the beets and keep warm until the sauce is a rich red. Add salt if necessary.

Upside-Down Vegetable Cake

2 c. sifted flour 1 c. milk 4 c. cooked mixed 3 tsp. baking powder vegetables ½ c. vegetable ½ tsp. salt 1/3 c. shortening water
2 T. butter 1 egg beaten

Mix and sift dry ingredients together and cut in shortening. Combine egg and milk; add to dry ingredients, stirring until mixed. Arrange hot seasoned vegetables in bottom of greased, shallow baking dish; add vegetable water; dot with butter. Cover with the first mixture; bake in a hot oven 20 to 25 minutes. Cut in wedges, serve with tomato or egg sauce.

Tomato Sauce

c. tomato juice 2 T. flour T. butter 4 tsp. salt T. butter

Prepare in same manner as white sauce.

Cabbage With Sour Cream Sauce

medium cab-½ tsp. salt bage 1½ T. flour 1 c. thick sour 1/8 tsp. pepper ½ tsp. sugar 2 T. chopped parsley cream

Cut cabbage into wedge-shaped pieces, boil in salted water. Drain well. Combine flour, sour cream in saucepan; add vinegar, sugar and seasonings. Cook, stirring until thickened. Add parsley and pour over cabbage.

Vegetables With Cheese Sauce

1 c. diced celery or canned Swiss 8 small onions 4 carrots. quartered chard stalks c. boiling water ½ tsp. salt

Add onions, carrots and celery to boiling water. Cook vegetables 15 minutes or until done. Drain.

4 T. butter 1½ c. milk 4 oz. Canadian T. flour ½ tsp. salt cheese

Melt butter in top of double boiler; stir in flour and salt. Add milk, stirring in gradually. Cook 15 minutes, until mixture is thick and smooth and no starch taste remains. Add cheese cut in small pieces to white sauce. Continue cooking until cheese is melted. Pour cheese sauce over vegetables. Bake in moderate oven (350°F) for 15 minutes.

Sweet-Sour Spinach

To 3 c. cooked, chopped spinach add ½ tsp. salt, 1 tsp. sugar, 1 Tand 2 T. butter. Stir and heat.

Corn Pudding

1½ c. milk 1½ c. chopped, cooked corn 3/4 tsp. salt 2 small eggs or 3 Few grains cayenne egg yolks 34 T. melted butter

Beat the egg; add the milk, seasonings, butter and corn. Turn into a shallow, buttered baking dish; bake in a pan of hot water in a moderate oven (350°F) until it will not adhere to a knife inserted in the centre (% to 1 hour). Cut in wedges. Serve as a vegetable.

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BUTTERFLY BUNS -(Makes 20 Buns)

Scald

3/4 cup milk 1/4 cup granulated sugar

11/2 teaspoons salt 1/4 cup shortening

Remove from heat and cool to lukewarm, In the meantime, measure into a large bowl

1/2 cup lukewarm water 1 teaspoon granulated sugar and stir until sugar is dissolved. Sprinkle with contents of

1 envelope Fleischmann's Royal Fast Rising Dry Yeast

Let stand 10 minutes, THEN stir well; stir in cooled milk mixture and 1 well-beaten egg

2 cups once-sifted bread flour and beat until smooth; work in 2½ cups once-sifted bread flour

Turn out on lightly-floured board and knead dough lightly until smooth and elastic. Place in greased bowl, brush top with melted butter or shortening. Cover and set dough in warm place, free from draught and let rise until doubled in bulk. While dough is rising, combine

1/2 cup brown sugar (lightly pressed down)
11/2 teaspoons ground cinnamon
1/2 cup washed and dried seedless

raisins

1/4 cup chopped candied peels Punch down dough and divide into 2 equal portions; form into smooth balls. Roll each piece into an oblong 24 inches long and 7½ inches wide; loosen dough.

Spread each oblong with

2 tablespoons soft butter or margarine

and sprinkle with the raisin mixture. Beginning at the long edges, roll each side up to the centre, jelly-roll fashion. Flatten slightly and cut each strip crosswise into 10 pieces. Using a lightly-floured handle of a knife, make a deep crease in the centre of each bun, parallel to the cut sides. Place, well apart, on greased cookie sheets. Grease tops. Cover and let rise until doubled in bulk. Bake in moderately hot oven, 375°, about 18 minutes. If desired, cool and spread with confectioners' icing.



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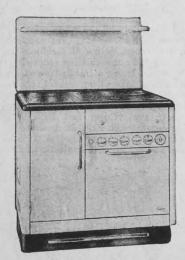
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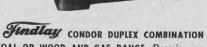
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SINCE



Marmalades

To add zest to a spring breakfast

TF spring finds your supply of jams and jellies nearing depletion, try making one or more of these inexpensive, easily-made marmalades to fill your jars. Their fresh, tart flavor and bright color will give a lift to spring breakfasts-or to breakfasts at any time of the year. Most of them are ready for immediate use, yet all of them have good keeping qualities.

For marmalades, choose citrus fruits that are quite firm, neither overripe nor green, free from blemishes, and with no "color added" markings on the skins. Thick-skinned fruit is best, for it is the rind that contains the pectin or gel-forming substance necessary for making any conserve.

You will find that these marmalades have a really delightful, fresh, full flavor, just right for any occasion.

Three Fruit Marmalade

1 medium-sized 1 large orange 1/4 tsp. salt grapefruit large lemon Sugar

Scrub fruit thoroughly in water; scrape off all traces of rust or scale. Discard a slice from the stem end. Cut the grapefruit in eighths; the lemon and orange in quarters; remove seeds; place cut side down on a board and slice as thinly as possible, with a sharp knife, taking care to retain the juice. Weigh or measure the fruit. Put it in a saucepan with water, allowing six cups of water to each pound, or two cups, of fruit. Heat the mixture slowly to boiling. Then boil rapidly 30 to 45 minutes or until the peel is tender when pierced with a fork. Cover and let stand overnight. Next day measure the mixture. There should be approximately 4 c. for each pound of fresh fruit.

Place the measured, cooked peel in a kettle with the salt and sugar, allowing 3 to 4 cups of sugar for 4 cups of the mixture. Stir over low heat until the sugar is dissolved; then boil rapidly with frequent stirring for 15 to 20 minutes or until it gives a good jelly test. Let the marmalade stand in the kettle for about one-half hour. Stir for even distribution of peel. Fill hot jelly glasses or pint jars. Seal or cover with paraffin. Makes 5 pints.

Lemon Marmalade

3 lemons 3 c. sugar c. water

Wash lemons and then put them through the mincer. Boil lemons and water in covered container for 45 minutes. Add sugar and boil uncovered until it gives a good jelly test. Makes 2½ to 3 pints. For best results it is wise not to increase the size of this recipe.

Quick Orange Marmalade

10 c. cold water oranges 10 c. sugar

Slice the oranges and lemons crosswise, through pulp and rind, in as thin slices as possible. Discard all the seeds. Add cold water and allow to stand over-night. Boil until the rind is tenderabout 3 hours. Add sugar; boil for one hour and pour into sterilized glasses. When cool seal with paraffin.

Imitation Orange Marmalade

1 lb. carrots oranges

1 lemon 3 c. water

Scrape carrots and put through the food chopper. Cook in boiling water, to cover, for 15 minutes. Wash oranges and lemons and squeeze out juice. Cook rinds in water to cover until tender. Put rinds through food chopper; add juice, rinds and sugar to carrots and simmer until thick and jelly-like. Pour into sterilized jars, and cover with paraffin when cool. It will not require long cooking as lemon rind contains a large amount of pectin.



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Pineapple-Apricot Marmalade

2 lbs. dried 1 large can apricots apple

Soak the apricots for 24 hours in plenty of water. Crush, but do not drain. Add the sugar and pineapple. Stir well. Boil slowly for one hour, counting time from when boiling starts. Pour into sterilized glass jars and seal. Makes 5 quarts.

Red Tomato Jam

1 tsp. allspice 1 qt. canned 1 stick cinnamon tomatoes lb. brown sugar c. seeded raisins
 T. lemon juice tsp. cloves

Tie the spices in a bag and cook with tomatoes and raisins. Add sugar and lemon juice. Remove spice and cook until thick.

Orange Jell

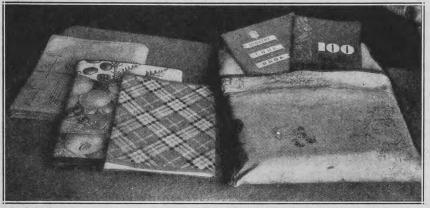
6 oranges 3 lemons

12 c. water Sugar
Peel off the yellow rind and discard. Peel the white rind and put through a meat grinder. Cut out the pulp of the orange and lemon; add to the white rind and cook in enamel or granite saucepan for one hour, with water. Strain through jelly bag. Let juice stand 24 hours, then pour off clear liquid. For every cup of liquid use 1 c. and 2 T. sugar. The maximum time for making orange jell is 20 minutes or, if the pectin has been carefully extracted, 15 minutes. Boil the juice 8 minutes; add the sugar hot and continue to boil vigorously 5 to 7 minutes, or until a good test is secured. Pour into sterilized glasses. Bits of the yellow rind can be put into the jell to give a better flavor, or an orange extract can be used.

New Look for Cook Books

Make plastic or oilcloth covers to give them a smart appearance

by EFFIE BUTLER



Plain or patterned oilcloth or plastic make attractive bookcovers.

OUR cook book is perhaps the most abused object in your kitchen. Think how many times it's been spattered with egg. How many bits of chocolate batter smears its face! And haven't you often turned its pages after your hands were sticky with pickle juice so that the finger prints it carries seem not to belong to a human hand.

But even your old favorite, your most dilapidated, be-spattered cook book can be given a new look. A quarter of a yard of table oilcloth or plastic material will make a new cover for one large and one or two small books. Cut a piece large enough to cover the back of the book when lying open, allowing an inch or two to lap over on the inside of the front and back covers. Now bind the entire edge with bias binding in a matching or contrasting color, Securely slip-stitch the front lap-over at top and bottom to the outside cover. Similarly fasten the back cover lap-over. Now slip this washable cover, which will not crack or tear, over your old cook book.

New material is not a necessity. If you are renewing the oilcloth or plastic covering on your kitchen table or serving counter, you are almost sure to find pieces that have not had to endure as much wear as the front or center. In many parts the pattern will be still unworn. The cook book covers in the illustration were made up of several such pieces.

If you can salvage a piece about twelve by twenty inches, make yourself a large oilcloth envelope. Turn in and hem or bind the edges with bias binding and securely stitch the ends together. You will find such an envelope a great aid in keeping your cook book drawer or shelf tidy for into it will go all the small recipe booklets and recipes clipped from newspapers and magazines which you wish to test.

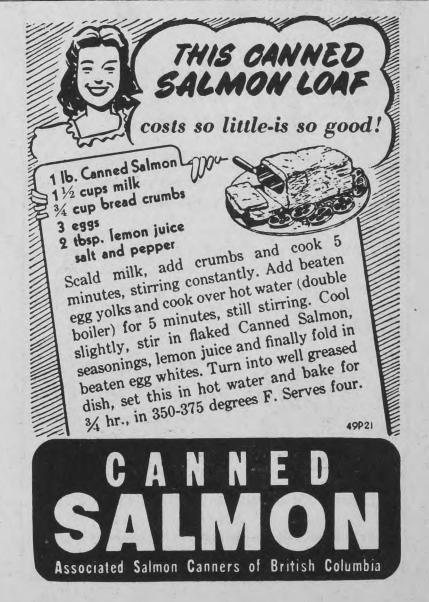
Many small repair jobs may be necessary to get your old cook book into working order. Loose and torn pages can be repaired with transparent scotch tape. Wipe the spots and splashes from the pages with a damp cloth. Keep a square of glass handy, one from an old picture frame will do, to lay over your open cook book. The glass will save your book from many spots yet you will be able to read the recipe with ease.

A very thin coat of clear shellac brushed over the more frequently used pages of your cook book makes them more durable and all spots are easily wiped off. This is a practical way of treating an indexed card set of favorite recipes but be sure each card is thoroughly dry before returning them to your file.

If you are keeping a scrapbook of recipes clipped from the newspapers but find you have heavy, dark smears caused by the paste soaking through the rather thin and porous newsprint, you may be using a paste of too thick a consistency. A very small, narrow paint brush is a handy aid in spreading the paste on your clippings. If you find the bristles too long and inclined to carry too much paste cut them off to about an inch in length with a sharp knife or razor blade. If washed and dried after each pasting your brush will serve many years.

An illustrated cook book makes a very attractive gift for a bride-to-be. Write or type a dozen or more of your own tested recipes, one to a page, in a strong, firm-backed or looseleaf notebook. Center the recipe nicely. Illustrate with food pictures cut from magazines.







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Starch for Crispness

Original freshness restored to fabrics

by MARGARET M. SPEECHLY

EVEN though full, stiff skirts are no longer worn, many washable cottons, linens and even rayons are much improved by a bit of starch. This restores their original crispness and gives them a smooth finish that sheds dirt readily. The ideal starch penetrates the meshes of the fabric, takes up sufficient moisture to make it pliable and imparts a gloss when ironed.

Successful starching depends on using just enough stiffening and not a speck more. This varies according to the material and to people's ideas of what is really a desirable crispness. A cotton dress requires sufficient "body" to make the most of its lines. Muslin or net curtains need enough stiffening to make them drape gracefully. If the dress or the curtains were dipped in starch suitable for a nurse's uniform, they would be stiff and unattractive.

Before you start to wash, collect all the articles that require starching, and sort them into three groups depending on whether they need heavy, medium or thin starch. This gives you an idea how much to make. Mix up plenty so there will be no delay and no skimping.

Buy a good brand of laundry starch, follow the directions on the package or use the basic recipe below. In any case measure the ingredients as carefully as if you were cooking. It is impossible to secure professional results with hit-and-miss methods.

Basic Recipe For Starch

½ c. laundry 5 c. boiling water starch 1 tsp. shredded white wax

Mix the raw starch and cold water together until smooth in a large, deep pan. A double boiler is suitable provided it is big enough, or you can set one pan inside another, with water between. Measure the boiling water and add it to the cold starch, stirring constantly until the entire mixture is thick and clear. Add the wax, stir until melted. Cover tightly and keep the starch over hot water until you are ready to use it.

Of course, you can cook the mixture over the direct heat, but it takes more care to prevent sticking, boiling over or lumping. Lumps are a total loss because these clusters of uncooked starch have no stiffening power and the rest of the mixture is thinner in consequence. If there is even a sign of a lump, strain the whole batch through a sieve in order to avoid ironing trouble.

Covering the starch is important too, as it prevents a film from forming on the surface. If you are called away and find that a scum has developed, remove it completely by straining.

Take steps to prevent the mixture from becoming cold as hot starch penetrates fabrics more completely than cold and does not leave glazed spots when ironed. The shredded wax in the recipe is not essential but it allows the iron to glide more easily.

The basic recipe can be adapted to suit your purposes. It makes two quarts of thick starch that can be used as it is or diluted as required. If the collars on men's light shirts have not a permanent finish, use the basic starch for the collars and cuffs and possibly the button band. Gather

them up in your hands and squeeze the starch through the meshes. Work it into the fabric and finish by putting the garment through the wringer.

Nurses' uniforms and aprons look well if you dilute two quarts of basic starch with five quarts of warm water. Mix well in a container that allows the articles to be immersed.

Gingham dresses, play suits and aprons do not need so much stiffness. For these try one quart of basic starch and six quarts of warm water.

Cotton goods such as dresser scarves, pillow slips or lunch cloths are freshened by dipping in a solution of one quart of basic starch and eight quarts of water. Linen cloths and napkins that are old and thin are much improved by the same treatment.

If you find that white starch shows up on dark cottons, try tinting the mixture with bluing for blue colors, or tea or coffee for browns.

When working with a two-piece dress, starch both parts at the same time so that they are equally stiffened. In doing up curtains, make up a batch large enough to do all of them at once. Allow four or five cups of hot starch for each pair, depending on the size of the curtains. Let them remain in the hot mixture until you can work it through the meshes with your hands.

Frilled curtains look smarter if the ruffles are gathered up and dipped into thicker starch than used for the body.

THE proportions of basic starch and water suggested above are only intended as a guide. Experiment with the dilutions until you secure the most satisfying results. Then make a record for future reference.

Run the starched articles through the wringer to remove the surplus. This helps to distribute the starch evenly and does a far better job than you could do by hand. Unless you use the wringer, the articles will be stiffer than you expect, on account of the extra starch that will remain in the folds.

Wringing each piece carefully from the last rinse is equally important as it prevents surplus moisture from diluting the starch solution.

Allow starched articles to dry completely before dampening, except in the case of curtains that you intend to dry on stretchers or to put on rods. You can save a lot of work simply by running a rod through the top hem of a straight net or muslin curtain and hanging it up in the window. In the bottom hem, run a second rod. Stretch the material gently, square the corners and run your fingers along the sides to flatten the edges. As soon as one curtain is dry, take it down and put up its partner.

Sprinkle starched pieces slightly more than unstarched, using warm water for quicker results. Fold neatly to avoid unnecessary wrinkles and cover with plastic or wax paper.

If curtains have ruffles, iron these first. Iron a few inches on the edge of the frill, then turn the iron and nose it into the gathers. When the ruffles are done, straighten the body of the curtain and work with the grain of the goods.

101

Useful and Pretty

A variety of ideas for spring needlework

by FLORENCE WEBB



Swing aprons

Design No. C-298.

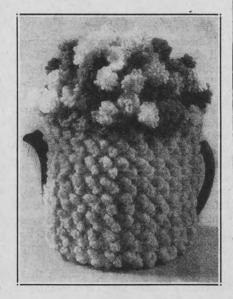
Big and little, aprons are practical and gay. Isn't this a charming idea? A bib to tuck under a little one's chin that exactly matches mother's apron. White crochet cotton or string is the material used. Both are in Pattern No. C-298. Price 20 cents.

Flowers Tea and Egg Cozies

Design No. C-114.

Make your teapot "bloom" with odd scraps of yarn. The bumpy crochet stitch keeps tea and eggs warm besides adding a gay note to your table. Flowers are bright bits of yarn wound around a pencil. Instructions for both the tea cozy and egg cozies are included in Pattern No. C-114. Price 20 cents.

Order by design number. Note price of each item. State color, where indicated. Address orders to The Country Guide Needlework, Winnipeg, Man.



Cross-Stitch Linen Cushion



Design No. 850.

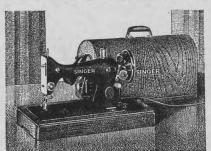
Two shades of one color are used for this easy-to-work design. Cushion is stamped on fine quality cream Irish linen and measures approximately 18 by 24 inches. When ordering threads please select from the following range of colors: Turquoise, wine, dark or medium blues, rose, brown or green. Design No. 850. Price \$1.75 (includes both back and front of cushion). Threads are 50 cents extra.



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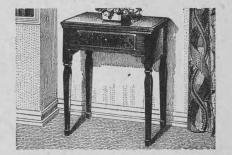
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Grandma Comes to Visit

And brings a gracious gift of zest for living to young minds

by ANONYMOUS

THE children are excited because tomorrow Grandma comes to visit. She'll only be here a few days. Just long enough, she says, to shake off the respectability of her apartment block and get the feel of city pavements out of her feet.

And while she's with us, she won't stray beyond the orchard and the grassy track between the field and the ravine. For Grandma can no longer walk through our British Columbia woods or climb the hills that overlook the sea. And yet-to us-she seems so

young and so alive.

That's the gift she brings our household-a share in her zest for life and in her deep delight at the wonders of the natural world. With Grandma, the children have stood beneath the cherry trees while the blossoms drifted down "like gentle snow." Or they have waited breathlessly with her at the big east window for the magic moment when a winter sun would climb "over the edge of the world."

How their minds are quickened by her simple but vivid turns of speech! The unknown comes closer, and even the familiar takes on an exciting freshness with phrases as "golden as a dandelion," "clammy as a frog," and "softer than pussywillow."

"Cheeky as a blue jay," Grandma will brand an uppish child. "You smell sweet as Balm of Gilead," she'll whisper to another who comes scrubbed and shining to the table.

Yes, Grandma makes the great outdoors seem very close and real. And while her monthly visits last, each day holds some unexpected pleasure. She may beckon a child to tiptoe to a window, to see a red-crested woodpecker clinging to the radio pole, listening and tapping by turns; or a squirrel's scolding by the maple tree. If one were to creep out quietly, he might still be there, busily cracking the light-winged seeds.

There's no end to the sounds that Grandma hears as she wanders through the orchard. A raven's croaking up the ravine, and somewhere in the bushes a cock pheasant's calling. That harsh voice belongs to a heron. Likely he's been wading with his long legs in the shallows of the creek. There's a kingfisher down there, too. Grandma heard his rattling cry awhile back. Chances are he has some favorite tree overhanging a deep pool, and such a splash he makes as he dives! And that's a killdeer, shrilling plaintively in the next field. If you go there, it'll flutter a few feet ahead of you, trying to lead you from the nest hidden where the sweet spring grass is growing. Four eggs there are, maybe, but you mustn't touch or go too often or the bird will leave the nest.

You see, Grandma has the knack of making birds seem almost human, of translating their activities into the understandable business of eating, raising families, and avoiding danger. She's not fooled by their tricks, either. Those woodpigeons, cooing so innocently, are waiting for a chance to raid the cherry tree, for a pigeon loves sweet cherries as a jay loves ripe corn

and fresh young walnuts.

The idea of their naughtiness fills the children with delight. They feel

the same way when Grandma shows them the wickedness of weeds - the pale roots of the twitchgrass creeping underground, the hooked seeds of the burdock, and the lightness of thistledown floating in over the fence.

A LWAYS, Grandma has a great respect for the resourcefulness of nature. She's never too hurried to admire the protective coloring of an insect, the ingenuity of an energetic ant, or the crinkled miracle of an unfolding leaf-bud.

It was from Grandma, too, that the children first learned the pattern of the seasons, their continuity and endless repetition. Such-and-such would happen, Grandma'd say, when the hummingbirds came back from the south. "No bonfires yet," warned one summer day. "Not till there's frost in the mornings and the maple leaves are deep enough to scuffle."

Grandma knows about the fun of scuffling in the leaves on a golden October afternoon. She and her brothers and sisters did it half a century ago.

"We hadn't expensive toys as you have," she tells the children. weren't near stores with comic books and candy and ice cream. Of course we had no picture shows or radio. So we made our own fun or found it out of doors.

It's a theme which Grandma often discusses after the children are in bed. She grieves to see how dependent many youngsters are on the man-made pleasures of today. She's genuinely appalled by the false values of most movies, radio and comic strips. They're quite incapable, she feels, of laying the foundation for a contented, constructive adult life.

"I'm not a rich woman," Grandma ends softly, "so I can't leave the children any worldly wealth. But if I can show them the ways of nature, and make them consciously aware of birds and plants and trees, their lives need never be commonplace. They'll have a sense of permanence and stability. And no matter where they go, they'll find others who speak the same language.

ambition

Delve deep! Soar high! Let it not be said That I Forsake my goal! (Whatever, however . . . Whether it be to make a bed Or darn a hole In a sorry sock, Or to count the stars of all the universe Forever . . .)

Nothing is better or worse. To build a span Across a river, Wind the clock, Create a symphony, Or climb The smallest apple tree-These, judged by Time And man, Are vastly different though the same, According to ambition's flame.

-LORETTA PARKER.

Hands and Feet Check-up

Keeping feet healthy and hands well groomed add to one's comfort and good appearance

by LORETTA MILLER



Ann Todd, charming film star, believes in good grooming and simple hairdo.

AKE your feet and your hands this spring. . . . Have they been working overtime and getting less consideration than usual? Now that spring is here, it's time to check up on these extremities and give them careful attention. Feet have been encased in heavy boots during the past few months, and both feet and hands have been subjected to severe cold and this has left its mark. Give hands and feet half an hour's attention and they'll look and feel as young as springtime.

While feet are being immersed in hot Epsom salts water you can give the hands some care. To about two gallons of hot water add one cupful of Epsom salts. Let them dissolve, then keep your feet in this warm solution for 20 to 30 minutes. During this time remove old polish from fingernails, shape the nails and apply cuticle remover to the cuticle and under the tip of each nail.

This step accomplished, use either an orangewood stick with a sharp end or a metal cuticle pusher for pushing back the cuticle off the nail and loosening excess cuticle. Then use scissors or nippers for removing excess cuticle. If you are of the school which does not believe in cutting the cuticle, simply push it back into place. Either remove or groom the cuticle at the sides of each nail. This is important to neat looking fingertips. The shaping of the nails and the grooming of the cuticle are the basic and most important steps to nice looking fingertips. Whether or not one uses a liquid nail enamel is a matter of choice.

Before continuing with the fingernails it's time now to give attention to feet. Remove one from the warm solution, and, using a coarse-textured towel, dry it well. Fold the towel over the finger and dry around each toe nail. This will help remove loose cuticle. If excess cuticle has attached itself down to the nail, use an orangewood stick and the cuticle remover, and treat the nails of the toes exactly as you did your fingernails. It may be better to remove excess toenail cuticle than try to groom it. Use the point of an orangewood stick, wrapped in cotton, for cleaning and grooming the sides of each nail. Then dip the orangewood stick into cuticle oil and apply the oil around each toe nail.

IF callous spots have appeared on the balls of the feet and around the heels, use a callous file or a piece of pumice for erasing the surface of this hardened skin. Use either of these carefully in order not to irritate the skin. If this step proves the least bit irritating, by all means substitute a Turkish towel for the pumice or callous file, rubbing the coarse cloth across the offending area of hard skin. Then make an application of petroleum jelly and rub it over the treated area. A rather generous coating of the heavy grease should remain on the feet. Wear a pair of loose-fitting cotton socks to bed, if you apply the jelly before retiring. Otherwise postpone the application of petroleum jelly until bedtime. The use of petroleum jelly every night will help discourage the accumulation of callous skin. Use either the callous file or pumice every two, three or four days, depending upon how readily the callous skin forms. Erasing the skin just as quickly as it forms, plus the application of petroleum jelly to keep the skin soft, will aid greatly in doing away with this bothersome foot trouble.

Heavy cushions of callous skin over the balls of the feet are uncomfortable and should be given consideration. The chances are these are the result of some slight foot disturbance, and the basic cause should be corrected. Perhaps little metatarsal discs which any shoe-repair man will paste into your shoes will solve the problem of bracing the arch against this trouble. If the balls of the feet seem to burn and cause discomfort, a piece of heavy felt tape, which you may purchase at your local drug store, will bring immediate comfort. This will not correct the trouble, but will serve as a temporary

Now back to fingernails! The use of cuticle oil or cream is a "must" to every girl who wants her nails to maintain a lovely, well-cared-for look. The nightly application of such a preparation will help keep the cuticle in line and will do much to prevent broken and split nails. Cuticle ice, cuticle oil, or cuticle cream may be obtained in your local drug store and complete directions accompany each package. Let me add, however, that this preparation, used every night, will do more for keeping the nails nice than will an occasional manicure.

Look at toe and fingernails occasionally and see whether or not a minute's care will ward off some major trouble. Perhaps care of a tiny end of loose cuticle will prevent a painful hangnail. Perhaps a small, hard spot on the top joint of the toe means a corn is forming. A piece of adhesive or heavier tape pressed over this area will remove the pressure of the shoe and ward off further discomfort and any immediate danger of a corn.

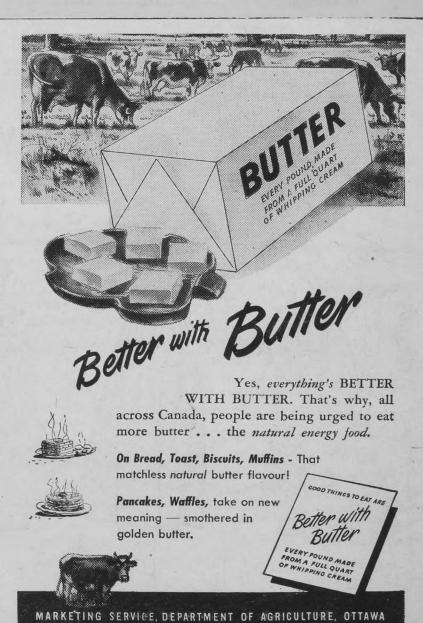
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No. 662—Tucked blouse, the perfect undersuit accessory for this season. It is smart as a costume-making piece in its own right, too. Choice of collar and sleeves. Sizes 10, 12, 14, 16, 18 and 20 years; 34, 36, 38 and 40-inch bust. Size 16 (34) requires 2½ yards 35-inch fabric for short-sleeved blouse. Price 25 cents.

No. 665—Blouse and skirt with scalloped suspenders and a matching scalloped border around the skirt. Try it in a dark and light color combination. Sizes 2, 4, 6 and 8 years. Size 4 requires 1½ yards 35-inch fabric; 1½ yards 35-inch contrast. Price 25 cents.

No. 664—Basque frock, cute enough for real Irish lace trimming but equally sweet with starched white eyelet. Sizes 6, 8, 10, 12 and 14 years. Size 8 requires 2% yards 35-inch fabric; % yard 85-inch contrast; 2 yards trimming. Price 25 cents. fabric; % yard 35-inc ming. Price 25 cents.

No. 663—Skirt with gathers at waistband for easy fitting. Comfortable, and smart to wear with almost all blouse, jacket and sweater styles. Sizes 24-inch waist, 33-inch hip; 26-inch waist, 35-inch hip; 28-inch waist, 37-inch hip; 30-inch waist, 39-inch hip; 32-inch waist, 41-inch hip. Size 28-inch waist requires 1% yards 54-inch fabric for the skirt with two pockets. Price 25 cents.

No. 649—Very dressy is this wide-sweep neckline and puffed sleeves of an otherwise simple little frock. It would make up nicely in a checked taffeta for party wear. Sizes 10, 12, 14, 16, 18 and 20 years; 34, 36 and 38-inch bust. Size 16 (34) requires 4% yards 39-inch fabric. Price 35 cents.

663 Hollywood
BIUNGUAL PATTERNS 664

No. 657—Two-toner, or, if you wish, make it in a single color. You'll appreciate its simplicity, which means success even for the beginner who uses a striped fabric. Sizes 10, 12, 14, 16, 18 and 20 years; 34, 36 and 38-inch bust. Size 16 (34) requires 3 yards 35-inch fabric; 1% yards 35-inch contrast; 3½ yards trimming. Price 25 cents.

No. 648—Two-piecer with easy lines making it easy to sew and easy to wear. You may choose the daytime or the evening version. Sizes 9, 11, 13, 15 and 17 years; 33 and 35-inch bust. Size 13 requires 4% yards 39-inch fabric for shorter dress. Price 35 cents.

Hollywood Spring and Summer Fashion Book—beautifully illustrated, contains almost two hundred styles suitable for every occasion for spring and summer wear. The designs are attractive, up-to-the-minute, yet practical and easy to make. Price 35 cents.

No. 658—Casual frock with the details that add up to long wearability. You'll like it in a dotted sheer for warm days, and in a wool stripe for chilly ones. Sizes 10, 12, 14, 16, 18 and 20 years; 34, 36 and 38-inch bust. Size 16 (34) requires 5¼ yards 39-inch fabric. Price 25 cents.

No. 1650—Neckline charm on a full-skirted dress with brief sleeves and a waistline which is shaped and tucked to make yours seem tiny, too. Have either the Queen Anne collar or rippling revers. Sizes 10, 12, 14, 16, 18 and 20 years; 34, 36 and 38-inch bust. Size 16 (34) requires 3½ yards 39-inch fabric. Price 35 cents.

Be sure to state correct size and number of pattern wanted. Write name and address clearly. Note price of each pattern. Address orders to The Country Guide Patterns, Winnipeg, Manitoba.



Peace Tower

Continued from page 5

but over the years, it makes reporters regard themselves purely as Commons reporters. You forget the Senate is alive; if it is!

SENATORS come and go, and nobody ever knows who they are. When you go into the Senate, usually you have no House plan; you cannot tell who they are. I know all the 262 M.P.'s by sight already (less those still to be elected), but I still would be lucky to name 70 Senators, at best. When Senator Lesage died the other day, I realized I had never got to know him by sight, though he was around here more than five years. A couple of years ago, just before his death, I interviewed Sir Thomas Chapais. One French Canadian reporter remarked: "Why I thought he had been dead for years!" Need I say more on this theme?

It is perfectly true that you get on good personal relations with many senators. But this is an individual matter. One does not seem to get to know them collectively. Writing for a western paper, I must comment on the political virility of Conservative Senate Leader John T. Haig; of the elder statesmen's qualities of Sen. Thomas A. Crerar; of the still bright intellect

of Hon. James Calder, now getting eightyish. Then there is Sen. Walter Asseltine of Rosetown; that rugged individualist, Sen. Horner of Blaine Lake; Hon. W. A. Buchanan of Lethbridge is outstanding. No one could miss the distinguished Sen. Aristide Blais of Edmonton. But these are as individuals; in the Senate, they are as individual as peas on a plate, and frequently as flat.

The Senate does foolish and fussy things. It has its own post office, functioning a scant 10 feet from the efficient Commons post office. Then it insists on having its own reading room, 100 feet down the same hall from where the Commons reading room is. Imagine the duplication in papers and periodicals. I cite these things, not to be vindictive, but to show you how fussy the honorable senators are about their own prerogatives. But, when it comes to serve the public, they operate to all intents and purposes like a Star Chamber.

Senator Donald MacLennan said with some cynicism, that if the Senate wanted headlines, it would have to talk about Minnie the Cat. Minnie was a page one story in the Ottawa Citizen the day before. The truth was that it was not Minnie that was to blame. It was the Senate itself. Spaghetti-spined, it has sunk to innocuous desuetude.

If the Senate wants the ear and eye of the public, it must deserve the Canadian ear and eye. First, it must make it easier to get news. But secondly, it must make news. I'll borrow a statement from the man at the next desk to me. He said:

"If the Senate wants to land on the front page, let them take a government department, and cut its estimates 25 per cent. It has the power to do that. Instead of being Yes Man to the Liberals, let them start trying to save the people's money. That will get them the publicity they want."

Alas, the Senate has lost its Grass Roots touch. It is supposed to be the chamber that takes "The Second Look." But too rarely does it favor anybody else except the coupon cutter; such at least is what the taxpayer feels. The Senate could be the lodestar of the downtrodden; instead it is getting like the appendix, not much use to anybody, and if painful enough, should be removed.

Let me give you the picture. These elder statesmen still seem to fancy that if they look hard enough, Sir Richard Cartwright will come stumping up the steps, his forked beard visible from afar. That serious man with the thick patch of hair, Mr. Robert Borden, seems to have prospects. Sir Wilfrid Laurier has just got

off the Laurier Avenue car, one of these new pay as you enter cars with real air brakes. And some of the older men are a bit shocked, now that the lights on Parliament Hill are going to be converted from gas to electricity next week. The year is 1908. In public relations, the Senate's back there some place too.

A Wife is Valuable

Read this if you think you can't afford to marry

HOW much for a farmer's wife? For years back some American professors of agricultural economics have been studying farm records to find the answer to this question. A few years ago a Minnesota professor placed her value at \$69,000.

Now, an Illinois professor who has examined thousands of farm records, comes up with about the same figure. He says a married farmer, on the average, has a net income of \$2,400 higher than an unmarried farmer and that this at four per cent interest on investment, is worth \$60,000 or, at the rate yielded by U.S. savings bonds, \$82,789. Furthermore, this is an average figure, covering large and small farms, good and poor land.

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"IT'S TRUE! MY WASH CAME DAZZ-LING CLEAN—WITHOUT RINSING!" says Mrs. D. A. Layfield of Toronto "And washing with new Heavyweight Tide—without rinsing—sure spoils you for any other kind of washday. I'll never rinse again!"



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It's new! It's got stepped-up washing power!

No other washing product known matches NEW heavyweight TIDE for getting out dirt and soap film, too ...yet it's truly safe for colors!

JUST WAIT till you see how clean new Heavyweight Tide gets hard-to-do things like workshirts and overalls! Because of its new stepped-up washing power, every grain does

> MORE FOR YOUR MONEY! SO MUCH MORE WASHING POWER, EVERY PACKAGE GOES MUCH FARTHER!

more work . . . licks your toughest laundry problems. Yet with all this terrific new washing power, it's safe for all your colored washables!

GET NEW HEAVYWEIGHT TIDE! Try it without rinsing and save yourself time...save work...save precious hot water! Save wear and tear on your clothes, too. See how beautifully fresh and clean your clothes come...see how nice and soft they dry... how easily they iron. All without rinsing!



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Midget or Dwarf Vegetables

Plant breeders have originated some diminutive varieties which have distinct advantages for the prairie garden

by CHAS. WALKOF

HE short, compact and bushlike plants of the midget-type vegetables are an important acquisition of the short season garden. For many years these small-plant vegetables were principally novelties. But in recent times plant breeders, realizing the value of the wind resistant and early ripening qualities of these sorts, improved the appearance and flavor of the fruits they produced. Now the midget varieties merit a place in every short season garden.



Bush squash growing at Morden.

When reference is made to midget vegetables the general impression seems to be that the small size refers mostly to the fruits or roots of the vegetables in question. In many cases this is true, since the midget variety of sweet corn has small ears as well as small plants. However, in the case of tomatoes there is a difference as varieties are now available having small plants and rather large fruits. Plant breeders are also working towards large pods of peas on small plants.

The reason that most midget-type vegetables are early ripening, or produce fruit or roots early in the season, is because of their small plant size. The plants, because of their short stature, reach their full size early in the season. Accordingly, their edible parts, whether fruits or roots, begin to enlarge and subsequently ripen early. In contrast, the large plant type of vegetable must have considerable growing time to attain full size or the stage of growth when the fruits set and then ripen.

Midget vegetable plants can be spaced close together. Frequently this distance is from one-third to one-half the distance of the large-growing sorts. Close spacing is a decided advantage in the confined space of a small garden, such as is often found in a town or city. It is also a marked advantage to the farmer growing vegetables on a larger scale. It takes the same amount of work to care for an acre of planted tomatoes whether the plants are spaced one foot or three feet apart.

It is obvious that midget tomato plants cannot produce as much as the large plant types. However, the advantage of the small plants is in the earliness with which they produce fruit. The farmer growing midget tomatoes on an acre basis can obtain a fair volume of fruit early in the season when the prices are highest. Although the individual plant yields are not large, the close plant spacing boosts total production. Yields of 12 to 15

tons of ripe tomatoes have been reported in the Morden area for the dwarf Early Chatham variety.

Wind resistance is a highly important feature of midget vegetable plants. Their compactness and low growth prevents wind damage. The large and long-vined plants are easily whipped, twisted and rolled around by the wind. This damages the plants to the extent where little fruit will set.

DROUGHT resistance is a highly desirable feature of the midget vegetables. The small plants, because of a limited amount of foliage, do not require as much moisture for growth as the large plant sorts. The midget peas normally receive ample moisture in most seasons to produce a desirable crop. The tall-growing sorts require a considerable amount of moisture, first to produce a full sized plant, and secondly, to set and fill the pea pods properly. Poorly filled pods are often due to insufficient soil moisture.

Spraying or dusting vegetables for insect or disease control is simplified where midget-type plants are grown. They are easily covered because of their small plant stature, and it takes one-third to one-half less material to cover the dwarf plant as it does the large-growing type.

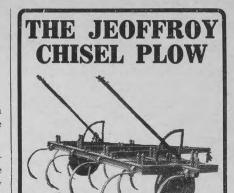
A number of midget-type vegetables are now being marketed by prairie seed firms. More will become available as time goes on. At present the Midget and Dorinny sweet corn varieties are excellent sorts to grow. The plants grow two to three feet tall and produce small ears, four to five inches long with eight rows of kernels. They are ideal for eating fresh, for freezing, or for canning in ears in jars. The Early Chatham is the leading dwarf and early tomato. It is highly recommended for the short season garden. Still smaller plant type tomatoes with large fruit are now being developed at the Dominion Experimental Station, Morden, Manitoba, and will soon be ready for distribution.



Cheyenne bush pumpkin requires limited space.

A highly attractive tomato, Meteor, is about ready for commercial seed channels. Similarly, seed of a new midget garden pea, Tiny Tim, being increased as rapidly as possible for general distribution. This pea, with vines only eight to nine inches tall, bears from five to seven pods per plant. Single stem strains and multiple stem strains are being thoroughly tested for their practical value.

In 1949, the shelled peas of Tiny Tim registered 14% per cent sugar.



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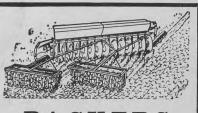
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*BONUS: Something given in addition to what is usual or strictly due.

— Webster's Dictionary.



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Cherry Belle is a dwarf plant radish with cherry-size roots when they are at their best for the table. The roots are a brilliant red color, sweet in flavor, and the flesh remains solid despite hot and dry weather. Most seed houses feature this variety.

The Touchon strain of Scarlet Nantes carrot is favored for the prairie vegetable garden. The plant tops are short and the roots reach edible size quickly. In beets, the Detroit Short Top variety is excellent for the short season localities because it is ready early. Moreover, when the roots reach a two-inch diameter they hold this size and remain in excellent condition longer than many other sorts. The short plant tops are thought to be responsible for the slower growth once the desirable root size is obtained.

Midget or bush strains of vegetables, such as pumpkin, squash and cucumber, are also available. The Cheyenne bush pumpkin is excellent for table use. The Caserta and Uconn squash varieties are highly valued. To obtain the greatest good out of the early squash Caserta, the gardener should pick the fruits while they are small, six to eight inches long, slice and boil them like a vegetable.

Melons are not yet available in midget or bush form. However, Farnorth is an early and highly desirable muskmelon. It possesses excellent flavor. The Sweet Sensation, Early Canada and New Hampshire midget varieties are the earliest watermelons now available. When well grown they produce fruits of excellent quality and delightful flavor.

Edward E. Bayne

Career as a worker in farm organizations for nearly half a century comes to a close

THE death of Edward E. Bayne on March 17 removes one of the best known and best loved figures among the farm leaders of western Canada.

Mr. Bayne was born in Listowel, Ontario, February 20, 1872, of Irish extraction. He moved with his family to Virden, Man., when he was 17 years of age, only a few years after the completion of the C.P.R. main line. He remained on the farm for 24 years and, in fact, retained ownership of it till within a few years of his death.

When the farmers' movement took shape in the early years of the century, Mr. Bayne, with his fellow townsman, J. W. Scallion, were in the very forefront. He had the good fortune to outlive the old Grain Growers' Association, but as long as it remained the voice of the organized farmer in his province he was always a willing volunteer in its service. Because of his record as an effective worker he was put in charge of the Grain Growers' elevator at Virden in 1913. About this time he also founded a private coal business which he operated during his stay at Virden.

When the Grain Growers' Grain Company was merged with the Alberta company in 1917 to form the United Grain Growers, Ltd., the new company picked him for its country organization chief for its eastern district. His work in that capacity earned him a place on the Board of



Edward E. Bayne

Directors in 1930, where he has served since. Few men can have travelled as widely through Manitoba and none have been more widely respected and affectionately regarded. He was a quiet man, with a sympathetic ear, and unrivalled judgment. A former president of the company has testified that had Edward Bayne the formal education of some of his associates he could have gone any distance in business.

Throughout his life he was a faithful supporter of his church. As a young farmer he drew the first load of stone for the construction of the basement of the church in Virden. One of his last activities for this church was to aid in the campaign to erect a memorial window for the pioneers of the district. On moving to Winnipeg

in 1917 he became a staunch pillar of Young United Church, indeed he was fatally stricken on the way home from a church function.

Mr. Bayne lies buried at Virden, just across the road from the farm dwelling he occupied for so many years. He is survived by his widow, the former Mary Buckingham, whose family were early settlers in the Elkhorn district, and who taught school locally.

They Plow By Night

WORKING at night in the field is made more difficult when a bright beam of light is used, because it is not possible to see anything clearly that is not in the brightly lighted zone. A firm in England has recently adapted lights used on aircraft, for tractor use. This relies on low intensity lighting, graded so that it fades gradually into darkness.

The equipment consists of an airfield beacon lamp attached 10 feet above the ground to a vertical pole clamped to the tractor seat. An aircraft landing light is mounted on the front of the tractor. The beacon lamp is fitted at the peak of a specially designed conical reflector and below another reflector, so that a circular area around the machine is lighted, the light gradually fading out to a distance of about 150 yards.

The tractor driver is shaded from the bright beam of the lamp by a small shield at the base of the beacon. The headlamp provides an area of forward illumination about 10 feet wide and bright enough to allow accurate work.



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detaches from hose for positive greasing of hard-to-reach fittings. Attached to "Red A" Bucket Pump, can develop $10,000~{\rm lbs.}$ pressure.

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Ideal for the farmer who has a lot of farm equipment. This portable Utility Pump provides a complete field service.

NOW—genuine Alemite fittings in transparent packages for your convenience. Wrapped in sets of six to a package, you can see the fittings you want. Look for the Alemite fitting display at your dealer's

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The Country Boy and Girl



A FURRY coat, a lilac dress, a golden heart—our beautiful crocus! No wonder the people of Manitoba have chosen this hardy flower for the emblem of their province for it braves the wintery winds and chill spring days to come and tells the people of the prairie that spring is here. But they are not the only people who love this flower, for our American friends in the State of South Dakota have chosen the crocus as their floral emblem also. As you wander out on the damp, colorless prairie

land in the spring, suddenly you see a flash of lilac, you rush forward, the ground is covered with clumps of crocuses. Did you know that this flower is also called, and more correctly, the prairie Anemone or Pasque flower?

"Caw! Caw!" He makes a lot of noise, but we do not mind for in his noisy way this crow is saying, "Spring is here." He has been back from the South for a few weeks now and is beginning to look for a place for his home.

"Cheer up! Cheer up!" a sociable robin calls to us as he flies by, we hope he

builds near our house.

Inside our homes it's spring, we know, for Mother has taken down the curtains and is busy doing housecleaning, each room has its turn. Most girls like to fix up their own rooms at this time of year, rearrange the furniture and make bright, fresh curtains. Outside Dad is doing his own kind of spring cleaning, fixing the seeder, seeing that the tractor is in running order, cleaning seed wheat. Yes, it's really spring!

The Pink Slippers by MARY E. GRANNAN

THEY had come to Susie in a pink box. She knew that the pink slippers were magic the very minute she lifted the lid. She slipped her feet into them, and she could feel their magic in her dancing toes. As she spun around the room in them, she heard the slippers calling up to her,

"Susie, we'd like you to know
We'll take you dancing far away
To magic lands . . . to fairy lands
Tell us what you wish today."

Susie sat down on the floor, stretched her pink-clad feet out before her and looked at her wonderful slippers. She began to think, "Where do I want to go . . . what shall I wish?"

Then she thought of the Old Woman who lived in the shoe, and she wished to go see her. She could feel the pink slippers twinkling, so she leapt to her feet again, and the pink slippers carried her straight away to Mother Goose Land.

And there was the Big Brown Shoe House, of the Old Woman. It was all very quiet. The curtains of the tiny windows in the ankles of the shoes were fluttering in the wind. There were the brown steps of the toe of the shoe, and the tongue served as its door. Susie went up the steps and rang the bell. The Old Woman answered. She put a finger to her lips when she saw Susie, and said "Quiet! I have just gotten them all to bed, and I don't want any of them to wake. I'm so tired I don't know what to do."

Susie told the Old Woman that she understood and that since she now had magic pink slippers, she'd come back another day when the children were up. "Because, Old Woman, I would like to see your many children."

Another day the magic pink slippers carried Susie to see the Man in the Moon. He was very happy indeed to see Susie, and invited her to come again. It was on a Wednesday afternoon that Susie happened to notice her Panda Bear, who was sitting on the floor by the window, crying. "What is the matter, Panda?" she asked.

"I'm hungry," he sobbed.

Susie flushed. "Oh, I'm sorry. That's my fault. I'll get you a nice dish of porridge."

"No," said Panda. "It's not your fault, and I don't want porridge. I want some bamboo. That's what Panda Bears like to eat. Didn't you know that my very name, 'Panda,' means Bamboo eater?"

Susie shook her head. She hadn't known that. In fact, she hadn't ever heard of bamboo before. Panda explained to her that it was a tree that grew in China, and that China was his real homeland. "But," he said, "I'll never ever taste bamboo again, because I'll never get back to China again."

Susie laughed, and said, "You're wrong, Panda. I can take you to China. Didn't you know I had magic pink slippers?"

Panda didn't know, but he promised Susie that if she would take him to China to get some bamboo, he'd be a good Panda forever more. Susie slipped her feet into the slippers and sang,

"Magic slippers carry me, Off to China 'cross the sea."

In a flash she was there, with Panda under her arm. "I'll just sit here, Panda, under this cherry tree, while you eat your bamboo." The little black and white fellow hurried off, smacking his lips at the delightful thought.

While she was waiting a little Chinese boy came along. He was surprised to see this little white-faced girl under the cherry tree. He asked her how she had come to his land.

"Oh, I came in my magic pink slippers," she said. "They are wonderful slippers. They will carry me anywhere."

The little Chinese boy looked at the slippers with envious eyes, and then he said slyly. "Slip off the slippers so that I may see them."

Susie did, and the little boy ran off with the slippers. Susie cried out in fear. Without the slippers she would have to stay in China forever more. "Panda, Panda," she called.

Panda came running to her. She told him what had happened. "Don't worry, Susie," he said. "I'll get them."

He scented the tracks of the little

He scented the tracks of the little boy. He bared his teeth, and growled. The Chinese boy knew that Panda was more than a match for him, so he dropped the slippers and ran away.

Susie said the magic words and they were home again. "Panda," she said, "I do hope you got your dinner of bamboo before I called out to you."

"Yes," said the Panda, "and do you know, Susie, I didn't like it as much as I thought I would. Will you please get me a dish of porridge?"

Susie takes Panda everywhere now, when she goes to magic places in the pink slippers.

Game Of Changeling

You will find this game absorbing when you get into it. You can think out other groups of words that will change similarly. You begin with the first word and by the number of steps mentioned in each number you arrive at the last word, changing only one letter at each step. Each change must be to an English word. If you are in doubt about your word consult a dictionary. You will be surprised at the number of small words you haven't heard of before.

Here is an example. To change songs to timid in six steps you might use: Songs, tongs, tones, tomes, times, timed, timid.

1. Pulp to mile in four changes. (Pulp, pull, pill, mill, mile).

2. Boot to shoe in three steps. (Boot, soot, shot, shoe).

3. Plump to slims in three steps. (Plump, plums, slums, slims).
4. Wares to tills in four steps.

(Wares, wales, tales, tiles, tills).5. Come to taps in four steps.

(Come, tome, tame, tape, taps).
6. Bread to cries in four steps.

(Bread, breed, creed, cried, cries).
7. Party to homes in six steps.
(Party, parts, tarts, tares, tames, tomes, homes).

8. Coin to bare in four steps. (Coin, corn, born, barn, bare).

9. Boys to lass in four steps. (Boys, toys, toss, loss, lass).

10. Bird to want in four steps. (Bird, bind, wind, wand, want).

11. Head to foot in five steps. (Head, held, hold, fold, food, foot).
12. Land to seas in four steps.

(Land, lend, lens, leas, seas).

13. Smoke to flame in five steps.
(Smoke, stoke, stake, slake, flake)

(Smoke, stoke, stake, slake, flake, flame).

14. Bird to tall in four steps. (Bird,

bard, bald, ball, tall).
15. Talk to cult in four steps. (Talk,

15. Talk to cult in four steps. (Talk, tall, call, cull, cult).

A correct answer need not necessarily follow the order given in the answers here. So long as you arrive at the last word in the number of steps asked for you can use any words that will get you there.

Arrival Of Spring

Winter's last chickadee nodded her head

And smiled at the sun growing warm and red.

The first crow flew down with a cheerful "Caw!"

On the field where snow had started

The sap rose high in the willows' throats,

And elm buds burst from their dark brown coats.

The south wind coaxed at the tulips

to grow

And crocuses bloom on the hills, I

know.
But not till I heard a meadowlark

sing

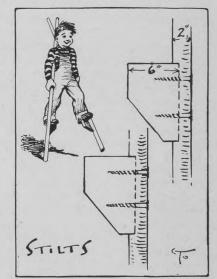
Did I really and truly believe it was spring!

-Effie Butler.

Have Fun With Stilts

HAVE you ever wanted to go striding across the country like the great giants you have read about in fairy stories? Have you wondered how it feels to look down on people from "way up there?" Find out—by making yourself a pair of stilts.

You need two smooth poles about six or seven feet long and two inches thick. Be sure the poles are perfectly sound so that your fine sightseeing



adventure doesn't end in a bad tumble. The foot rests should be cut from a two by six-inch plank. The higher the foot rests are placed from the ground the larger the stride you can take, but it is harder to manage your stilts. About 18 inches would be a good height to begin with. Fit on the foot rests as shown in the diagram setting them into the wood, then screw them on securely.

Get on your stilts while a friend holds them for you or climb on from a box. Hold the poles as shown and off you go—but not too fast!—A.T.

A nickel is much bigger than a copper. How many coppers would you need to surround a nickel? And for the still bigger quarter? Of course the coppers will not exactly fit with either nickel or quarter, a gap will be left between the last two surrounders. It takes exactly six to surround a copper. How many for a nickel or a quarter? (Answer: Six coppers will do in each case. The gap widens but won't admit a seventh.)



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THE NOR'-WEST FARMER and FARM and HOME

Serving the farmers of Western Canada Since 1882

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No. 4

Revising CNR Finances

For many years Canadians have been talking about revising the capital structure of the CNR but nobody did anything about it. The new president of the road, Donald Gordon, has made it one of his first tasks. His evidence in mid-March before the Royal Commission on transportation has thrown into clear relief the necessity for lessening the dead weight of interest on capital which had already been dissipated before the CNR passed into government ownership.

Mr. Gordon's radical proposals have provoked a great deal of controversy and the degree to which they will be accepted is unpredictable. The only certainty is that the Canadian public will have to foot the bill in one form or another, either as taxes or railway rates.

The Financial Post suggests that it is now time to end the hocus-pocus whereby CNR revenues have to be balanced out of tax money. It suggests that the CNR and CPR should be put on a comparative footing, and that from thenceforth freight rates should be adequate to meet disbursements and provide for the future. It admits that the CNR includes political lines, like the Newfoundland railways recently dropped into Donald Gordon's lap, on which the anticipated annual loss will be \$4 millions. But, it says obscurely, "Let all this be taken into account in rate making."

How, in the name of common sense, can such considerations be taken into account in rate making? Does the Post recommend a level of rates which will enable the CNR to break even across its whole system, after an alteration of its capital structure? It must be perfectly aware that under present circumstances the Canadian railways make the bulk of their profits on western lines. Every rate increase falls with unequal severity on western traffic for the simple reason that eastern rates are held in check by highway and water-borne competition.

It is unrealistic to talk about the abandonment of all political lines. They must be continued to serve outlying parts of Canada, and the losses sustained by their operation are a proper charge on all of the people of Canada, which means the national exchequer. Any demand for western shippers and consumers to pay higher rates to compensate for losses on unprofitable CNR lines, to say nothing of swelling profits for its competitor by the incidence of the same rates would be monstrous injustice. No taxpayer likes to see large sums paid yearly out of the public treasury to pay CNR deficits, but it is the price Canada must pay for enterprising extensions of its economic frontier.

Defense Expenditure

The estimates before the federal house call for a defense expenditure of \$425 millions in the coming fiscal year, and a further commitment of \$198 millions for expenditure in future years, making a total of \$623 millions. It is a staggering sum for a second-class power in peacetime, greater than the total cost of federal administration not so many years ago. Nevertheless there is no outcry about it. The public is so fully aware of the explosive nature of international relations that it is unanimous in agreeing that unpreparedness would be false economy. The public will pay to the limit of its ability. Its one concern is that it is getting full value for its money.

In that connection the plaint of the opposition is that it has no means of knowing. Estimates of other departments are gone over with a fine tooth comb, but the need for secrecy is used as a reason for denying information to parliament. Defense items totalling millions have to be dismissed with a nod because no member can obtain the facts on which intelligent criticism must be based. The opposition therefore renewed its demand this month for a sub-committee on estimates which could analyze defense expenditures, as far as may be done without delving into matters of strategic or tactical nature. As on previous occasions the government has refused to establish such a sub-committee on the debatable ground that it would be an unwarranted innovation in parliamentary government.

If the present high rate of government spending continues, it is certain that this proposal for adequate investigation will not die down. Many defense experts, like Major General G. R. Pearkes, V.C., member for Nanaimo who distinguished himself in the debate on the estimates, want to know more about the reasons underlying the change in policy regarding purchases of jet interceptor aircraft. For the present the R.C.A.F. is equipped with British Vampires, the accepted type for most of the Atlantic nations. Parliament is being asked to vote \$30 millions this year for the purchase of American F-86's, popularly known as the Sabre. The reason given for the switch is that the Sabre holds the speed record at low levels, and that it is unwise to depend on overseas sources of supply during wartime.

These arguments are not readily acceptable. The Vampire is faster at high levels at which most bomber interceptions will now be carried out, and it is an incomparably faster climber and more maneuverable. Vampire airframes are said to cost one-third of those of the Sabre. In view of the fact that both types will probably be relegated to the scrap heap at an early date by the all-Canadian CF-100, dependence on Britain for Vampire spare parts does not seem to be such a weighty matter.

Most important of all, Canadians whose private purchases in the U.S. are being curtailed will want some very good reason for switching purchases from Great Britain to dollar markets on such a big scale. Uniformity of equipment with our great neighbor with whom we will be closely allied is a desirable end, but in the relative state of the Canadian and American economies it is plain folly for this country to make huge defense purchases in the U.S. without fully compensating American purchases of Canadian-made equipment, if necessary of American-type goods made in Canada under licence. It is as much to American advantage as to our own that thorough-going co-operation in the production and allocation of munitions should be carried out. A policy of weapon unification which benefits one country industrially at the expense of the other is unacceptable. Military procurement should not be allowed to jeopardize or retard the strenuous efforts this country is making to improve its trade balances.

The Map Makers

It is related of one of our worthy Swedish citizens that after he had spent two years learning how to pronounce the word "jar" the word became changed to "yug." That is the way we feel about the latest proposal to alter the geography which caused us so much distress in our youth.

At one time John Bracken proposed that the three prairie provinces should be consolidated to save expense in administration. Then Prof. Lower, of Queen's University, wanted to break up the larger provinces into fragments, which would certainly have contributed to a solution of our dominion-provincial relations. Now Irvin Studer, M.P. for Maple Creek, wants to split Saskatchewan right down the middle, giving the western half to Alberta and the eastern half to Manitoba.

Had Mr. Studer, or someone else, advanced his arguments 45 years ago we could have been persuaded. We doubt, however, if he will attract many supporters for the idea in the provinces concerned in 1950. The sentiments of loyal citizens of the province to be cannibalized will be outraged, and probably the provinces more generously endowed by Nature, lying on either side, will fail to generate any enthusiasm. The C.C.F. regards it as an attempt to break up their hold on the province and the other political parties in Alberta and Manitoba look askance at the addition of areas which they regard as

hotbeds of dissent. The Liberal press did not fail to suggest that Saskatchewan's troubles, regarded by Mr. Studer as insoluble, were due to six years of Socialist rule. It is doubtful if that argument will be endorsed by fair-minded people. There are too many living who remember the heavier incidence of crop failure on Saskatchewan in the '30's and the train of debt it left behind. There are too many who realize that Saskatchewan will always be the hardest province to finance unless and until it can develop on a large scale resources other than agriculture.

But it was a good idea, Mr. Studer, and worth a headline.

To Combat Economic Nationalism

The New York press of March 30 carried a news item of some significance to the trading nations plagued with a dollar problem. It announced that President Truman had selected the former Secretary to the Army, Gordon Gray, for a new post. His duties will be to co-ordinate administration efforts to close the dollar gap. In an off-hand comment the president said that his country exported goods last year to the value of \$16 billions, while its imports in the same period totalled only \$10 billions, and that it could not go on doing business on that basis as it was hampering the rehabilitation of countries being aided by Marshall funds and other support policies. His formal statement indicated that Mr. Gray would supervise the efforts being made to analyze the present disparity between exports and imports, and that out of these studies there would develop a full public discussion and, he hoped, policies most likely to lead to a satisfactory solution.

In these times when the American press is full of references to domestic producers complaining about the influx of cheaper foreign goods, and demanding greater tariff protection, it is very comforting to have an assurance from the highest authority in the land that there is some understanding in the U.S. of the incompatibility between the economic recovery and the military potential of the Atlantic nations on the one hand, and American economic nationalism on the other. A tremendous battle is brewing between the Truman administration and its opponents on this issue and there is no guarantee that the former can carry its case, for both labor and industry are united in invoking the ancient fetish of protection.

The lesson is not without its application here in Canada. Dollar-hungry nations are bound to make some inroads on our domestic market, and Canada will have to deal with them sympathetically or suffer the consequences in diminished exports. It is plainly a case of reviving trade all round, or stagnation which will hit Canada hardest among the nations because of her high per capita export trade.

No Tariff Hand-Outs Here

Ordinarily Westerners do not put much dependence on the ability of either of the major parties at Ottawa to resist the wails of Canadian industrialists who, having waxed fat in the period of shortages, now find themselves confronted with imported goods at lowered prices. But Mr. St. Laurent has given them reason to hope that he will be tougher minded than some of his predecessors.

Speaking in the House on February 20, he is reported in Hansard as having said "that the impact of the devaluation of sterling has meant some distress to a few of our industries. That was foreseen, and it is something which I think we just must not attempt to prevent. For the good of the nation in general we want an increase in the exports of Great Britain to ourselves, our imports from the United Kingdom, so that the price of these imports can be converted into dollars usable to pay for the surpluses we must continue to export to the United Kingdom. Such distress is something unfortunate that has to be considered. We have to attempt to deal with it, but we must not attempt to deal with it in a way that would shut out such imports from our country because they are harmful to some of our local industries. It is the only way in which we will secure the restoration of world trade, and of the trade that is essential to the prosperity of this country.'

Arctic Resource

example, Canada can develop enue for her northern people

. FENTON

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he Eskimos were the worst The Eider duck was to the caribou is to our In-1 and clothing. The Eider meat and eggs: its skin was

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lining of garments, and in ; of beautiful blankets.

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llon (1918) who says: we awaited the dis-

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d Eider Duck

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ests; we boiled

eggs, and we we did every-

w hours 4,000

gathered from

Rock. Here

department of the interior, Ottawa, to collect eiderdown thereon. As yet this venture is in its infancy.

The food of all Eiders is obtained exclusively from the animal kingdom. The Atlantic and the Arctic Oceans supply the Eiders with the organisms on which they thrive, mussels, starfish, sea-cucumbers and crustaceans.

The female Eiders nest in communities near salt water. The female can cover five of its olive colored eggs quite well. Surplus eggs over this number in a nest are removed by the conservator to other nests lacking five eggs. The conservator builds additional nests to induce more Eiders to his hatchery. In this way he builds up his holding to capacity.

IDERS build their nests in depres-E sions where they are partly hid by brush, boulders, rushes and willows. The female duck plucks from her breast the warmest, softest and most valuable down known to man, and binds it into her nest. No profit is gained in shooting an Eider for its down; the down will die with the bird. In so doing, loses its value. About thirty nests will produce one pound of this dull grey down.

The period of incubation is one month, and is performed by the fe-male. When the duck reluctantly leaves her nest to feed the conservator removes some of the down. On returning to her nest she will pluck more down to replace that which has been removed. This act is repeated several times, or, until the duck has plucked from her body all available down.

It has been found that the cleaning of the down for market can be facilitated by exposing it, on horizontal chickenwire platforms, some two feet off the ground, to strong sunlight for two or three days and, while it is so exposed, turning and shaking it occasionally with a pitchfork. During this treatment, the platforms are surrounded by boards, some 10 inches wide, placed on edge. This is sufficient to prevent the down, which is very cohesive, from being blown away by light winds. This sunlight treatment rids the down of about half of its foreign matter with a minimum of

There has been a definite increase in Eider ducks since the Migratory Birds Conservation Act became law. This is especially noticeable in the Gulf of St. Lawrence, and the southern coast of Labrador.

The price of eiderdown in Canada at present is \$7.50 per pound. A great many firms across Canada use eiderdown in the manufacture of pillows, sleeping bags, crib blankets, bed blankets, comforters, and the back lining for parka coats and arctic down

There's no reason why Canadians living along our coasts can't over a period of years work up a remunerative business, and in time equal the Scandinavian countries in production. In fact Canada stands in an enviable position in regard to this industry. We all the resources at our hand; the s, and a long stretch of coast line, habitat, and an established

To Make a Man Beam...



this mocha masterpiece by MAGIC!



What man could resist this exotic dream of a cake . . . coffee-flavored . . . speckled all through with shaved chocolate...spread over with billowy-deep coffee frosting! Delicate to the last wispy crumb - made light as chiffon with Magic!

Yes, for tender, moist, fine-textured cakes every time you can count on pure Magic Baking Powder. Safeguards your precious ingredients-yet Magic costs less than 1¢ per average baking. No wonder 3 out of 4 Canadian housewives insist on Magic. Put Magic on your grocery list to-day.

MAGIC MOCHA CHIFFON CAKE

21/4 cups sifted cake flour 3 tsps. Magic Baking Powder

1 tsp. salt 1/2 cups fine granulated sugar 2 cup salad oil

5 unbeaten egg yolks

Sift flour, Magic Baking Powder, salt and sugar into mixing bowl. Make a well in the centre of flour mixture and salad oil, egg yolks, coffee and vanilla; mix these liquids a little with mixing spoon, then combine with flour mixture and beat until smooth. Add chocolate and beat to combine (a potato peeler shaves chocolate thinly). Sprinkle cream of tartar over the egg whites and beat until very, very stiff (much stiffer than for a meringue). Gradually fold

3/4 cup cold strong coffee 1 tsp. vanilla 3 ounces chilled semi-sweet chocolate, thinly shaved ½ tsp. cream of tartar

1 cup egg whites

egg-yolk mixture into the egg-white mixture. Turn into ungreased 10" deep tube pan (top inside measure). Bake in rather slow oven, 325°, 136 to 1½ hours. Immediately cake is baked, invert pan and allow cake to hang, suspended, until cold. (To "hang" cake, rest tube of inverted pan on a funnel or rest rim of pan on 3 inverted small cups.) Remove cake carefully from pan and cover with a brown-sugar 7-minute frosting in which strong coffee is used in place of the usual water.

hese two countries Eiders are

mall island alone

on long sledge trips.

ever possible.

have many enemies:

ne shells are often broken and

ontents poured or squirted from both of the Eskimo into the in-

sheath of the bearded seal, or

a most nutritious sausage to be

le from the human element, the

s, owls, gulls and so on. They try

oid one of their worst enemies,

by making their nests on islands

Northern Eider is not deterred coldest weather. Its not un-

to see them feeding and dis-

themselves in water kept free by rip tides along the south of Aaffin Land.

OST of the world's eiderdown comes from Iceland and Norway.

ly protected, and are now pracv domesticated. Producing eiderin these Scandinavian countries become a thriving industry. The s are so well protected that they become accustomed to people, actually build their nests near

oducing eiderdown in the Scanvian countries has been progressover a period of several genera-. Those who embark on this new stry to Canada will have to proin the same cautious way with an to future profits. The main pringoverning this new venture are estrict protection to ducks and to disturb the ducks og the nesting period.



d.

Marshall-Wells (Westminster) Ltd.

Western Canada

Waterloo Manufacturi Eastern Cana

Sub-Branches and Transfer Points in Other Leading Farm Machinery Distr